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CHANGES IN COMPOSITION OF BLOOD IN PERNICIOUS ANEMIA

TREATED BY A DIET RICH IN LIVER *

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The strikingly beneficial value of a special diet for patients with pernicious anemia has been demonstrated recently by Minot and Murphy.[1] A diet containing, among other factors, a large quantity of complete proteins in the form of liver, and which was relatively low in fat, caused forty-five consecutive cases to show a prompt, rapid and distinct remission of the anemia coincident with marked symptomatic improvement, except for pronounced disorders due to spinal cord lesions.

We have studied certain changes in the composition of the blood in ten of these cases which were in the Peter Bent Brigham Hospital between November, 1925, and March, 1926. Our observations were made for the purpose of determining some of the physiologic changes that occurred in cases of pernicious anemia treated by this method. Our results are reported in this paper.

CLINICAL MATERIAL AND METHODS USED

The clinical material consisted of ten typical cases which were selected on account of the marked degree of anemia present. On entry into the hospital each patient was put to bed, where he remained until his general condition improved sufficiently to allow him to be up. During the first few days the diagnosis of pernicious anemia was established and control data were obtained. After this preliminary period of observation, each patient was placed on the diet originally described by Minot and Murphy,[2] consisting practically in a daily allowance of the following foods:

1. From 120 to 240 Gm., and sometimes even more, of cooked calf's or beef liver. An equal quantity of lamb's kidneys was substituted occasionally.
2. One hundred and twenty grams of beef or mutton muscle meat.
3. Not less than 300 Gm. of vegetables, especially lettuce and spinach, containing from 1 to 10 per cent of carbohydrate.
4. From 250 to 500 Gm. of fruit.
5. About 40 Gm. of fat derived from butter and cream, allowed in order to make the food attractive. Animal fats and oils were excluded so far as possible.
6. If desired, an egg and 240 Gm. of milk.
7. In addition, dry and crusty bread, potato and cereals, in order to allow a total intake of between 2,000 and 3,000 calories, usually composed of about 340 Gm. of carbohydrate, 135 Gm. of protein and not more than 70 Gm. of fat. Grossly sweet foods were not allowed, but sugar was permitted very sparingly.

Each patient continued to take this diet during the entire period of observation, which lasted, in most instances, for several months. The only medicine employed was between 4 and 8 cc. of diluted hydrochloric acid (U. S. P.), three times a day; all but one patient received this.

A detailed study of the blood was made in each case during a control period before the diet treatment was instituted and at varying intervals of time thereafter. Hemoglobin determinations were made by the Sahli method, and calculated on the basis of 15.6 Gm. of hemoglobin per hundred cubic centimeters of blood as a normal figure. Red and white blood cell counts on venous blood were made in standardized pipets and counting-chamber. The number of blood platelets was estimated from stained blood films, on which, also, the histologic character of the formed blood elements was observed. Reticulocyte counts were made from blood smears stained with brilliant cresyl blue and counterstained with Wright's stain. So far as possible, all these observations were made by one individual and at the same time each day in order to mininize any technical errors.

The concentration of bile pigments in the blood serum was estimated by the icterus index method described by Murphy.[3] Hematocrit readings were obtained on ten cubic centimeter samples of venous blood centrifugalized at high speed for thirty minutes. The color index and individual cell volumes were calculated by Haden's [4] formulas. The stroma index was calculated by Whipple's [5] formula. Total blood, plasma and corpuscular volume determinations were made by the dye method described by Keith, Rowntree and Geraghty,[6] except that congo red [7] was used instead of

* From the Medical Clinic of the Peter Bent Brigham Hospital.

* This study was aided by a grant from the Proctor Fund of the Harvard Medical School for the study of chronic disease.

1. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet, J. A. M. A. **87**: 470-476 (Aug. 14) 1926. Murphy, W. P., and Minot, G. R.: A Special Diet for Patients with Pernicious Anemia, Boston M. & S. J. **195**: 410-411 (Aug. 26) 1926.
2. Since these cases were studied, Minot and Murphy have shown that in order to obtain good results it is unnecessary that the protein intake of the diet should be as great as that taken by these ten patients.
3. Murphy, W. P.: Biliary System Function Tests, Arch. Int. Med. **37**: 797-814 (June) 1926.
4. Haden, R. L.: Accurate Criteria for Differentiating Anemias, Arch. Int. Med. **31**: 766-780 (May) 1923.
5. Whipple, G. H., and Robscheit-Robbins, F. S.: Blood Regeneration in Severe Anemia, Am. J. Physiol. **72**: 395-407 (May) 1925.
6. Keith, N. M.; Rowntree, L. G., and Geraghty, J. T.: A Method for the Determination of Plasma and Blood Volume, Arch. Int. Med. **16**: 547-576 (Oct.) 1915.
7. We are indebted to Miss Grace Roth of the Mayo Clinic for supplying us with some of this dye for our early observations, and for sending us explicit directions as to the technic of blood volume determinations with this method, based on her very wide experience.

vital red. Determinations of the corpuscular and plasma protein and of the plasma nonprotein nitrogen were made by Folin's [8] micro-Kjeldahl method.

Since all the data compiled by these methods on each of the ten cases is too massive to publish in detail, we have chosen to describe our observations in a general way, giving the actual figures obtained in a few illustrative cases. The figures recorded are characteristic of the results obtained in the entire series, so that nothing would be gained by repetition.

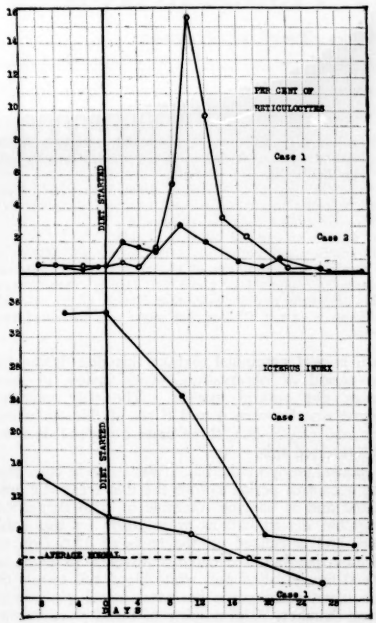

Chart 1.—Changes in the percentage of reticulocytes and in the icterus index observed in two patients with pernicious anemia partaking of a special diet.

THE RETICULOCYTES AND ICTERUS INDEX

Chart 1 illustrates the changes that occurred in the percentage of reticulocytes and in the icterus index in two cases before and after the administration of the diet.

In these cases an increase in the reticulocytes appeared to offer the first evidence of the delivery of new, young red cells to the general circulation from the bone marrow, as an increased reticulocyte count was invariably followed by a prompt and rapid increase in the hemoglobin concentration and in the red blood cell count.

The peak of the reticulocyte count, recorded in all the cases after diet treatment was begun, varied from 2 to 15.5 per cent, and in only one case remained below 6 per cent. Before the diet was started, the reticulocytes never formed more than 2 per cent and usually less than 1 per cent of the red blood cells. Increase in the circulating reticulocytes became evident as early as the third day, although it was usually not marked until from the fourth to the sixth day after the diet was instituted. The greatest increase occurred about the seventh day, but varied from the fourth to the tenth day. After reaching its highest point, the count gradually decreased, reaching the control period level by the second or third week.

During the period in which the reticulocytes increased, there occurred a sharp drop in the icterus index. The highest index of the ten cases, before the diet was started, was 40, five of the cases having an index between 10 and 15, while the lowest was 7. This is in sharp contrast to the average normal figure, which is 5. Determinations made as early as the eighth day after the diet was started showed a distinct drop in the icterus index. In nearly every case, a normal or even subnormal figure was reached by the beginning of the third week. An index of normal or lower was maintained in each instance during the subsequent period of observation.

It appears from the results obtained by means of these two tests that an increased proportion of young red blood cells appeared in the peripheral blood shortly after the special diet was taken, and that at the same time the amount of bile pigments in the serum began to decrease. One may consider the falling icterus index as indicative of a decreased rate of blood destruction, or of an increased utilization of hemoglobin derived pigments by the newly formed red cells.

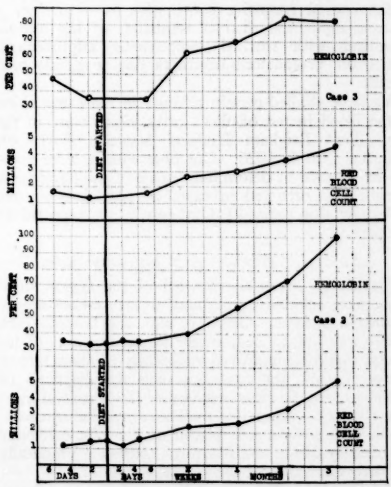

Chart 2.—Effect of a special diet on the hemoglobin percentage and red blood cell count per cubic millimeter in two cases of pernicious anemia.

HEMOGLOBIN CONCENTRATION, COUNTS OF THE FORMED BLOOD ELEMENTS, COLOR INDEX, AND HISTOLOGIC FEATURES OF THE BLOOD CELLS

Increases in the hemoglobin concentration and in the red blood cell counts were sometimes detected as early as the fourth day after the diet treatment was instituted, or at about the time that the reticulocytes increased in the peripheral blood. More often a definite

8. Folin, Otto: Laboratory Manual of Biological Chemistry, ed. 3, New York and London, D. Appleton and Company, 1922.

elevation of these factors was not detected until the patient had eaten liver for about a week. The hemoglobin and red blood corpuscles continued to rise steadily and tended, as Minot and Murphy [1] have already shown, to be greatest and most rapid in those cases starting with the lowest red blood cell counts.

The hemoglobin concentration increased in close proportion to the red blood cell count in practically every instance, although the color index, which was greater than 1 during the period when the counts were

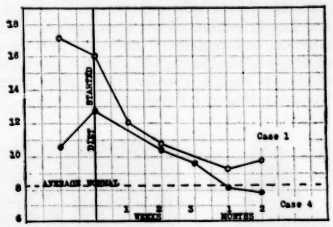

Chart 3.—Changes in the individual cell volume in two patients with pernicious anemia partaking of a special diet, expressed in cc. × 10^{-12}.

low, fell and became less than 1 as the red blood cell counts approached normal. These various relations in two cases are illustrated in chart 2.

In all cases the red blood cells in the peripheral blood, before the diet was instituted, had the characteristic features observed in pernicious anemia in relapse. There also occurred the characteristic leukopenia and thrombopenia. As the red blood cells increased, they no longer resembled those seen in pernicious anemia and not infrequently appeared entirely or essentially normal. Coincidently, the number of circulating white corpuscles and blood platelets approached normal.

THE INDIVIDUAL CELL VOLUME

Individual cell volumes were measured by Haden's formula in order that more convincing evidence might be offered regarding changes in the average size of the red blood cells than was possible through histologic description alone. In each instance, the cell volumes were much larger than normal during the period of marked anemia, becoming of normal volume or even less as the red blood cell counts rose. Entirely comparable changes in some of the same cases, as determined by direct measurements of the red blood cell diameters, are reported by Medearis and Minot.[9]

"STROMA" INDEX

The "stroma" index, as described by Whipple, is determined by dividing the normal hemoglobin percentage reading by the cell volume as determined by the hematocrit. The normal, average "stroma" index was 2.3 as determined by us in a series of cases with normal blood.

In our cases of pernicious anemia before the special diet was instituted, the "stroma" index was, in practically every instance, 2 or lower. This figure gradually increased as the red blood cell count rose, reaching a normal or higher than normal figure as the counts approached normal.

9. Medearis, D. N., and Minot, G. R.: Studies on Red Blood Cell Diameter: II. In Pernicious Anemia Before and During Marked Remission and in Myelogenous Leukemia, J. Clin. Invest. 3: 541-553 (Feb.) 1927.

BLOOD VOLUME

Definite changes in the blood volume were observed in all the cases under treatment. In most instances, the plasma volume remained relatively constant throughout while the corpuscular volume, and thus the whole blood volume, increased. In one case, the corpuscular volume increased threefold in less than two months' time, and quadrupled in less than three months. It is thus evident that following the institution of the diet there was an increased red blood cell production, with these cells becoming smaller in size, of more normal appearance, and having an increased "stroma" index, and accompanied by a definite growth in the blood tissue as a whole. Illustrative blood volume changes from two cases are recorded in chart 4.

THE BLOOD NITROGEN

The diet employed in the treatment of these cases contained a relatively large amount of protein. Thus the effect of this diet on various factors of the blood nitrogen was noted. Nonprotein nitrogen determinations were made on the plasma, and protein-nitrogen determinations on both plasma and whole blood. From the hematocrit readings and the figures for the two latter analyses, the protein-nitrogen contained in the corpuscles per volume of blood was estimated.

The plasma nonprotein and protein-nitrogen figures remained almost constant. The protein of the corpuscles, however, increased in direct proportion to the increasing hemoglobin concentration. It thus appears that our patients under treatment developed, at the same time with an increased red blood cell count, increased hemoglobin concentration and increased corpuscular volume, a blood which was richer in protein. On the other hand, the diet did not have a demonstrable effect on the nonprotein nitrogen of the blood or on the plasma protein, so that its chief effect was in

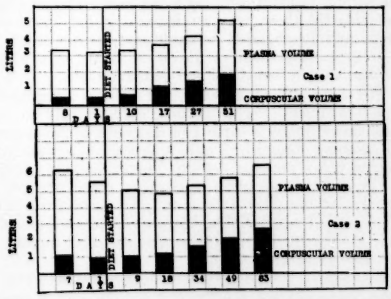

Chart 4.—Changes in blood, plasma, and corpuscular volume observed in two patients with pernicious anemia partaking of a special diet.

increasing the amount of circulating protein contained in the red blood cells. The figures obtained in two cases are given in the accompanying table.

Estimations were not made of the balance between the nitrogen ingested and that excreted in the urine, or of the effect of the diet on the total metabolism. It would be interesting to know if one could thus determine whether such a diet was accompanied by an increased rate of metabolism through the specific dynamic action of the protein contained in it, by a storage of nitrogen in the body, or whether its effect seemed to depend more exclusively on some particular

element or elements that permitted the maturation of the abnormal cells in the bone marrow.

SUMMARY

Changes were noted in the composition of the blood in ten patients with pernicious anemia, treated by a diet rich in liver. The results corroborate Minot and Murphy's observations that under proper dietetic care a prompt, rapid and distinct remission of the anemia is produced in each instance. The diet appeared to cause the delivery of new, young red blood cells from the bone marrow into the general circulation, as evidenced first by a prompt increase of the reticulocytes in the circulating blood. At about the time that there was evidence of a marked reaction in the bone marrow, there was a decrease of bile pigment concentration in the serum, as manifested by a fall in the icterus index. Coincidently there was an increasing red blood cell count and hemoglobin concentration, accompanied by a progressive growth in the blood tissue as a whole, as estimated by blood volume determinations.

The morphologic appearance of the red corpuscles under treatment became normal, or essentially so; the color index finally became 1 or less than 1; the average cell volume diminished and approached normal; the volume index and the "stroma" index became normal.

The diet did not produce changes in the nonprotein nitrogen of the plasma or in the plasma protein. The protein of the corpuscles, however, increased notably, and in almost direct proportion to the increasing hemoglobin concentration.

Changes in Blood Nitrogen Under Special Diet

Date 1926	Hematocrit: Per Cent Corpuscles	Hematocrit: Per Cent Plasma	Hemoglobin, Per Cent	Plasma Nonprotein Nitrogen, Mg. per 100 Cc.	Protein Nitrogen Mg. per 100 Cc.: Blood	Plasma	Corpuscles	Comment
Case 1								
Jan. 15	15	85	16	30	2,030	1,180	1,030	
23	14	86	19	36	2,040	1,240	980	Diet started
Feb. 2	20	80	25	31	2,340	1,130	1,440	
9	30	70	51	38	2,690	1,220	1,840	
19	34	66	64	34	2,910	1,220	2,100	
March 15	38	62	87	32	3,400	1,250	2,715	
May 23	39	61	94	28	3,300	1,210	2,560	
Case 2								
1925								
Dec. 12	17	83	36	24	2,230	1,340	1,190	
17	17	83	33	24	1,860	1,185	880	Diet started
26	20	80	38	29	2,130	1,160	1,200	
1926								
Jan. 7	26	74	59	23	2,480	1,320	1,560	
29	31	69	65	28	3,100	1,340	2,175	
Feb. 5	35	65	73	27	3,200	1,210	2,415	
March 10	41	59	101	30	3,400	1,345	2,610	
April 21	41	59	117	28	3,400	1,320	2,630	
June 9	40	60	115	23	3,200	1,200	2,480	

Educational Objectives.—The first and fundamental groupings of educational objectives that arise easily from a survey of the composite qualities of "efficient" adults are the four classes: physical, vocational, cultural and social. These classes are not rigid or altogether mutually exclusive, but for the present they will serve many useful purposes in thought and communication, provided we do not waste time in niceties of distinction or extent. The facts of physical and of vocational education, both as to results seen in adults and as to methods of education witnessed during childhood and youth, are fairly patent. The word "culture" is itself so ambiguous that difficulties can easily arise in trying to conceive the essentials of cultural education. But it is highly serviceable now to interpret culture (as a major objective of school education) chiefly in its nonutilitarian and largely personal aspects—as having little connection with vocation health or civic activities.—Snedden: Civic Education, p. 25.

PREVENTION OF CONTRACTURES FOLLOWING INFECTIONS OF THE HAND*

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The many crippling deformities resulting from infections of the hand that have come to my attention during recent years emphasize the fact that, if serious disabilities are to be avoided, attention must be concentrated on the preservation of function as well as on the control of infection. The old adage as to the ounce of prevention and pound of cure may well be applied to contractures of the hand, for the prevention of contractures is much simpler than their successful treatment once they are developed.

Fig. 1.—Contracture following operation for suppurative tenosynovitis with scars resulting from exploratory incisions on the dorsal surface, and directly over the median nerve.

The rapid and diffuse swelling of the hand and forearm associated with acute lymphatic infections is generally recognized as a danger signal which indicates absolute rest, hot dressings and abstention from any operative treatment. If exploratory incisions are made in such cases in the hope of finding pus (fig. 1), the patient may quickly succumb to a systemic infection; or in the process of a slow recovery the operative wounds become secondarily infected, extensive fibrosis occurs, and a crippling deformity results.

When a localized infection has developed, in contradistinction to an acute, spreading lymphatic infection, surgical incisions should be made which will give adequate drainage, which will not divide or destroy essential structures, and which will not lead to subsequent contracture. Kanavel,[1] some years ago, pointed out

* Read before the Ohio Valley Medical Association, Louisville, Ky., Nov. 10, 1926.

1. Kanavel, A. B.: Infections of the Hand, Philadelphia, Lea & Febiger, 1911.

the incisions of choice in the care of such infections. He emphasized the fact that these incisions afford a direct approach to the site of infection, that they tend to avoid crossing the flexion creases of the palm, and that they avoid the digital nerves and blood vessels. Unless such incisions are made under a general anesthetic, such as nitrous oxide, ethylene or ether, and through a bloodless field, secured with the aid of a constrictor, it is difficult to avoid injury of important structures, particularly of the flexor tendons and tendon sheaths in cases of palmar abscess, and of nerves and blood vessels. Unfortunately, it is not generally recognized that an important factor in the disability of the hand following infection is the atrophy and numbness resulting from injury or division of the median, ulnar and digital nerves (figs. 1 and 2). If the main trunk of the median nerve is injured by an incision on the volar surface of the forearm and wrist, the resulting disability is particularly severe and extensive.

Fig. 2.—Severe contracture resulting from surgical injury of the median nerve, division of the ulnar nerve, and prolonged immobilization in wet dressings.

In the immediate after-care of the hand infections, three points are worthy of particular emphasis: scrupulous attention to technic in changing of the dressings in order to avoid secondary infections; avoidance of the use of hot dressings for a longer period than is absolutely necessary, and institution of movements of the fingers and hand as soon as it can be done with safety.

In applying a dressing to an infected hand after it has been drained, it is my custom to lay a sterile towel on the arm board, to cover it with sufficient dressings to reach from the fingers to the shoulder, and to lay the arm and hand on the bed so prepared. Other dressings are laid on the arm, and the edges of the towel brought together around the whole and held with a few clips or safety pins. Just before it is closed, the dressing is saturated with hot sterile boric acid solution, or hot sterile water. A large electric light, which is shielded from the patient's eyes, is suspended over this dressing.

Every four or six hours the towel is unpinned, and without touching the dressings, the nurse pours over them sufficient hot sterile solution to keep them moist. For maintaining a moist dressing at a temperature of 110 F., this method is more effective than the intermittent application of steaming hot dressings, and the less frequent change of dressings lessens definitely the danger of secondary infection.

Once daily the dressings are changed, and with the same care that was used in their application. A sterile towel is unfolded on the bedside table, and covered with dressings held in sterile forceps. The soiled dressings are removed with forceps, any rubber tissue drains, or petrolatum gauze drains that have been inserted to help keep drainage incisions open are removed not later than forty-eight hours after operation, excess secretion is wiped away with small sterile sponges held in sterile

Fig. 3.—Restoration of function secured after a suppurative tenosynovitis involving the sheaths of the flexor pollicis longus, the flexor tendon of the little finger, and their prolongations in the forearm.

Fig. 4.—Restoration of function secured after a streptococcic tendon sheath infection of the right index finger. (The scar on the thenar eminence is due to an old burn.)

forceps, and without any washing or application of antiseptic solutions, the hand is laid on the prepared sterile bed and covered as before. These details of technic are emphasized because if one can avoid adding secondary infection to the original infection recovery will be hastened, convalescence will be more rapid, and subsequent disability will be greatly diminished. Garlock [2] showed recently, in a series of cases, that if secondary staphylococcic infection could be avoided in the postoperative care of streptococcic infections of the tendon sheaths, the tendons could be saved in almost every case (figs. 3 and 4); but if a staphylococcic infection had been added, it was practically impossible to avoid extensive necrosis with subsequent sloughing of the tendons.

The second point in the after-care is that the hand should never be allowed to become edematous and water-logged by the prolonged application of hot dressings. One who has had the misfortune to care for a patient whose hand was immobilized for weeks in a big, hot, moist dressing with the fingers extended, the thumb extended alongside the fingers and the hand lying in pronation will appreciate how greatly convalescence can be prolonged and recovery retarded by such a procedure (fig. 2). Within four or five days after operation, therefore, the first type of dressing described is removed and the arm bath substituted. Here, again, attention to asepsis must be carefully maintained because the chances of contamination are greater. Twice daily the hand and forearm are soaked for ten or fifteen minutes in a sterile bath of water or salt solution. After the bath, the hand is laid on a sterile towel and permitted to dry for an hour under an electric light. The use of such a light will help reduce swelling, hasten healing, and add greatly to the patient's comfort. When the hand is dry it is lightly bandaged with gauze.

Substitution of the arm bath for hot dressings early in the course of treatment not only prevents edema and maceration of the soft tissues, but permits early movement of the fingers and the application of a splint between soakings. When the hand is in the bath and while it is drying under the light, the patient should be urged to move his fingers actively and passively. It is almost incredible how quickly adhesions can form between tendons and their sheaths in the presence of infection, and how rapidly the small joints become involved in a fibrous ankylosis. Moving the fingers through their complete range of motion two or three times daily will help to avoid these complications. During the first few days, movements should be carried out with caution. They should not cause pain, and they should not be so violent as to stir up a subsiding infectious process. With each succeeding day it should be possible to secure a wider range of movement, so that restoration of movement may keep pace with the healing of the soft tissues.

Even before the big hot dressing is removed from the hand, not later than the second day, one should consider the position of function; i. e., with the wrist in dorsiflexion, the thumb abducted and facing the hand, and the fingers flexed as though they were grasping a ball.[3] This can be secured fairly well by placing a roll of sterile gauze, around which the patient can flex his fingers, between the thumb and fingers, and a pad under the hand to dorsiflex it at the wrist. As soon as the intermittent use of the arm bath is substituted for the hot dressing, a light aluminum splint may be worn the greater part of the day which will keep the wrist in dorsiflexion and permit free movement of the fingers. It is essential that the splint permit flexion of the fingers at the metacarpophalangeal joints. Too frequently the patient moves his fingers only at the interphalangeal joints; and the metacarpophalangeal joints, the most important of all, are allowed to become fixed by fibrous adhesions.

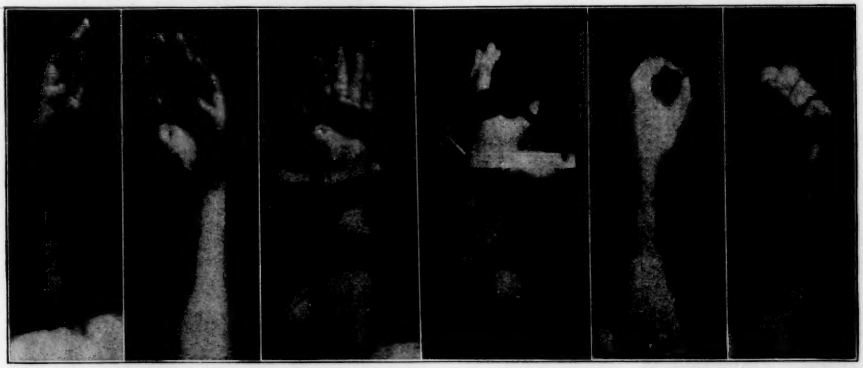

Fig. 5.—Restoration of function secured in an old contracture by arthroplasty at the metacarpocarpal joint of the thumb, prolonged splinting with elastic tension, and physical therapy: left, before treatment; right, after treatment.

USE OF PHYSICAL THERAPY

If contractures have already developed, several methods of treatment may be utilized to secure improvement. Properly directed and applied physical therapy is invaluable. Massage, stimulation of muscles and nerves with the galvanic and faradic current, and the use of lights, of hot and cold baths, of mechanical contrivances to move stiff joints and exercise atrophied

2. Garlock, J. H.: Surg. Gynec. Obst. **39**: 165 (Aug.) 1924.

3. Kanavel, A. B.: Splinting and Physiotherapy in Infections of Hand, J. A. M. A. **83**: 1984 (Dec. 20) 1924.

muscles, and of exercises, both passive and active, are all important factors in a comprehensive plan of physical therapy. They should be supplemented by the use of properly designed splints. If the nerves and tendons have been divided, or if they are held in a viselike grip by scar tissue, and if the joints have become ankylosed, some form of operative treatment becomes imperative.

The employment of physical therapy as an important adjunct in the after-care of infection and injuries received a tremendous stimulus from the necessities born of the war, and it is hardly necessary to dwell on the advantages or technic of this form of treatment. It may not be amiss to remember, however, that: 1. Scar tissue can be stretched and softened by exercise and manipulation, but tearing it produces hemorrhage and more scar tissue. 2. Massage and manipulation require a certain degree of experience and a considerable measure of physical labor on the part of the physical therapeutist. There is a tendency today to substitute expensive and highly polished apparatus for massage and manipulation, to the great disadvantage of the patient. 3. The application of heat, of light and of baths has one essential result, the production of an active hyperemia, and we are indulging in false hopes if we expect results from physical methods which are physiologically impossible. 4. An electrical current will produce muscle contraction if applied over the muscle itself or over its nerve supply, but active voluntary contraction is much more valuable in strengthening weakened muscles and in stimulating muscle regeneration. 5. Competitive games or productive labor designed to strengthen muscle groups, to stretch scar tissue and to exercise stiffened joints will produce infinitely better results than the endless repetition of definite exercises which do not hold the patient's interest or afford him any sense of achievement.

To supplement the work of the physical therapeutist I have found properly designed splints of great value. Stretching and bending stiff metacarpophalangeal joints, for example, for thirty or sixty minutes daily will help to overcome disability; but if a constant elastic tension can be maintained during a part of the remaining twenty-three hours, recovery will be greatly hastened. Most of the splints have been designed with the idea of bringing constant elastic tension to bear on joint capsules and on contracted muscles rather than with the idea of correcting deformities by rigid plaster casts or unyielding splints (fig. 5). The advantages of this method are that scar tissue is stretched and not torn, that pain can be avoided because tension can be regulated, and that the danger of pressure sores is eliminated.

SUMMARY

Contractures following hand infections may be reduced to a minimum if (1) drainage incisions are made with due regard for important anatomic structures; (2) secondary infection is not added to the primary infection; (3) hot dressings are dispensed with early in the course of treatment and replaced by the intermittent use of the sterile arm bath and dry heat; (4) movements of the fingers and hand are initiated as soon as the acute symptoms of infections have subsided, and (5) during periods of rest the hand is immobilized in the position of function.

54 East Erie Street.

THERAPEUTIC EFFECT OF HOT BATHS IN EXPERIMENTAL PRIMARY SYPHILIS IN RABBITS

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AND
ANNA M. RULE
PHILADELPHIA

Although an adequate explanation of the therapeutic mechanism of malaria and other fevers in syphilis has not yet been given, we[1] recently published an account of some studies on the effect of elevating the temperature of rabbits by hot baths in restraining the development of experimental syphilis. We appear to have demonstrated that eleven hot baths on consecutive days which produce an average rise of the rabbits' temperature of 4 degrees Fahrenheit will prevent the development of syphilis, when begun four days after intratesticular inoculation. The temperature effect appears to be exerted on the spirochete, for when a spirochetic emulsion is heated on a water bath under certain conditions for one hour at 40 C. (104 F.), it fails, when injected into rabbits, to produce syphilis. This is true despite the fact that the emulsion examined under dark field illumination shows at this time numerous motile spirochetes. They appear in some way to be biologically injured.

Fig. 1 (rabbit 7).—Well developed chancres thirty-three days after inoculation.

TABLE 1.—*Influence of Hot Baths on Scrotal Chancres in Rabbit 7*

Date	Temperature by Mouth: Before	Temperature by Mouth: After	Clinical Notes	Dark Field Examination
May 20.....	.....	.....	Normal: Inoculated into scrotum to produce scrotal chancre	
June 23, photographed	104	107.2	Medium chancre with marked induration	+4 very motile
June 24.....	104	107	Not any change.....	Few nonmotile
June 25.....	103.2	106.3	Not any change.....	+4 very motile
June 26.....	103.2	107.3		
June 28.....	102.2	108.1		
June 29.....	104.1	108		
June 30.....	105	109		
July 1.....	102	108	Chancre about healed	Negative
July 2.....	103.2	107		
July 5.....	103	108.4		
July 6.....	102.4	107		
July 7.....	102.1	108		
July 10, photographed	Average degree of elevation 5.2		Normal	Negative
July 20.....	.....	.....	Normal	
Aug. 4.....	.....	.....	Normal: lymph glands transplanted into 163 J. Examination every 7 to 10 days until October 26; negative	

1. Schamberg, J. F., and Rule, Anna M.: Studies of the Therapeutic Effects of Fever in Experimental Rabbit Syphilis, Arch. Dermat. & Syph. **14**: 243 (Sept.) 1926.

When they are heated to 41 C. (106 F.) for six hours, motion ceases and they begin to disintegrate.

This study was undertaken to determine the curative effect of hot baths on scrotal chancres in the rabbit. The scrotums of three rabbits were inoculated with a spirochetal emulsion originally of human origin, but which had passed through many generations of rabbits. Thirty-three days after inoculation, well marked chancres were present (fig. 1). Two of the rabbits were then given hot baths daily for about fifteen minutes, the temperature of the water being 113 F. The sublingual temperatures of the rabbits before and after the baths are noted in the accompanying tables. It will be seen that there was an average rise of temperature in rabbit 7 of 5.2 degrees F. and in rabbit 8 of 5.8 degrees F. Eight days after the institution of the baths, the chancres were almost healed and spirochetes had disappeared from the chancre serum. In two weeks they were entirely healed (fig. 2). This represents as rapid a disappearance as occurs after the use of arsphenamine.

Fig. 2 (rabbit 7).—Appearance eighteen days after figure 1; rabbit given fifteen hot baths; spirochetes disappeared in six days; chancres healed in fourteen days.

Fig. 3 (rabbit 9).—Well marked chancre thirty-three days after inoculation; untreated control.

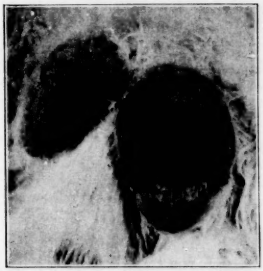

Fig. 4 (rabbit 9).—Untreated control: chancre greatly increased in size; eighteen days after figure 3.

TABLE 2.—*Influence of Hot Baths on Scrotal Chancres in Rabbit 8*

Date	Temperature by Mouth: Before	Temperature by Mouth: After	Clinical Notes	Dark Field Examination
May 20	.....	.....	Normal: Inoculated into scrotum to produce scrotal chancre	
June 23, photographed	102.2	106	Chancre both testes with marked induration	+1 nonmotile
June 24	102.2	105.2	Not any change	Few motile, few nonmotile
June 25	102.4	106	Not any change	+4 very motile
June 26	102.2	103		
June 28	102.1	107.3		
June 29	102.4	106		
June 30	103.1	107		
July 1	103.4	107	Chancres about healed	Negative
July 2	103.3	107.3		
July 3	103	106		
July 6	103.2	107		
July 7	102	107		
July 8	102.2	107		
July 9	104	107		
July 10, photographed	104.4	108	Both testes normal	Negative
July 20	Average degree of elevation 5.8		Both testes normal	
Aug. 4	.....	.....	Normal: lymph gland transplanted into 160-161 J. Negative, Oct. 26	

The untreated control progressed in the usual manner, the chancre increasing in size and showing abundant spirochetes on the date when the treated chancres were healed and spirochete free. Seventy-five days after inoculation there was still a hard chancre with numerous motile spirochetes present.

TABLE 3.—*Influence of Hot Baths on Scrotal Chancres in Rabbit 9*

Date	Clinical Notes	Dark Field Examination
May 20	Normal: Inoculated into scrotum for scrotal chancre	
June 23, photographed	Medium chancre with marked induration	+4 very motile
June 24, untreated	Not any change	+4 very motile
June 25, control	Not any change	+4 very motile
July 1	Chancre larger with marked induration	+4 very motile
July 10, photographed	Not any change	Negative
July 20	Chancre smaller but very hard	+1 motile
Aug. 4	Small chancre very hard	+4 very motile

In order to determine whether the treated animals were cured, the popliteal and inguinal glands were removed seventy-five days after inoculation, emulsified and injected into the testes of other rabbits. These were kept under observation for eighty-three days and have remained free of infection.

Weichbrodt and Jahnel[2] published, in 1919, an account of an experiment in which rabbits with experimentally induced chancres of the scrotum were placed in an incubator at a temperature of 41 C. for about half an hour twice a day. In from three to five weeks the chancres healed. The rabbits' rectal temperatures reached from 42 to 44 C. Subsequent inoculations with excised glands were not made.

2. Weichbrodt, R., and Jahnel, F.: Deutsche med. Wchnschr. **45**: 483 (May 1) 1919.

Luck in Research.—One of the commonplaces of research is the importance of luck in aiding research. The apple which fell on Newton's head, and the kettle lid which, dancing on the steam, suggested the steam engine, may be legendary, but we have many well authenticated examples. The frog's limbs which contracted when Galvani hung them from an iron bar with a copper hook led to all our knowledge of electricity; the deflection of the magnetic needle when a wire carrying a current was held over it suggested the telegraph to Oersted; the failure of a lecture demonstration pointed the road to Meyer's discovery of thiophene; the culture of the organism of chicken cholera which, after Pasteur's holiday, did not kill fowls but protected them from later inoculation with virulent cultures, paved the way to immunization. All these were merely lucky accidents; but accidents happen to all of us, while it is reserved to the few to make discoveries.—Bigger, J. W.: *Irish J. M. Sc.* **6**:23 (Jan.) 1927

VALUE OF SODIUM THIOSULPHATE IN POISONING FROM ORAL ADMINISTRATION OF ARSENIC*

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A truly effective chemical antidote for a poison would possess definite advantages over gastric lavage as a therapeutic measure. Lavage can be practiced only by some one specially trained; one cannot hope by it to remove the portion of the poison that has passed into the intestine; and it is extremely disagreeable to the patient and requires considerable time for its performance. The enthusiastic statements regarding the efficiency of sodium thiosulphate as an antidote for various metallic poisons are therefore of great interest.

Though first suggested by Ravaut,[1] the employment of sodium thiosulphate as an antidote in this country has been due to the papers of Dennie and McBride.[2] These authors state that sodium thiosulphate is "a highly efficient and rapid neutralizing agent for the common metallic poisons: arsenic, mercury, lead, and bismuth." Semon [3] feels that it "may be found an indispensable adjunct in the treatment of all cases of acute metallic poisoning." In support of these contentions, numerous clinical reports have appeared of cases in which the supposed antidote has seemed to have a favorable influence.

In a recent paper from this laboratory,[4] attention was called to the danger of drawing positive conclusions as to the value of an antidote in mercury poisoning solely from clinical observations. In this paper, experiments were reported which tended strongly to show that sodium thiosulphate did not possess any value at all in the treatment of poisoning produced in dogs by the oral administration of mercuric chloride, although the "antidote" was administered much more promptly after the poison than would ever be possible clinically. Both the clinical [5] and the experimental observations which support the use of sodium thiosulphate as an antidote for arsenic have been carried out in cases in which the poisoning was produced by organic, nonionic arsenicals. Unfortunately, it is difficult or impossible to produce in lower animals the condition against which sodium thiosulphate has been most extensively used clinically; namely, the arsenical dermatitis. On the other hand, it is a comparatively simple matter to determine the approximate minimal lethal dose of an inorganic arsenic preparation for dogs by oral administration, and a clear demonstration of the efficacy of the antidote in this form of arsenical intoxication would be of scarcely less importance than actual proof of its value against the arsenic dermatitis. With the hope of securing positive evidence as to the value of sodium thiosulphate in acute poisoning following the oral administration of an inorganic preparation of arsenic, the subject has been investigated in this laboratory.

The experiments have been carried out on apparently healthy adult dogs. A twenty-four hour period of starvation preceded the use of the animals; and, to prevent vomiting, they were given 10 mg. of morphine sulphate per kilogram of body weight subcutaneously, half an hour before the administration of the poison. As the source of the arsenic, solution of potassium arsenite (Fowler's solution) was employed: it was measured from a buret into a funnel connected with a stomach tube and was rinsed down with about 25 cc. of water. Sollmann [6] states that the approximate minimal lethal dose for this preparation administered orally to dogs is from 0.5 to 1 cc. per kilogram of body weight; from our experiments, it seems to lie between 0.5 and 0.75 cc., as shown in table 1.

TABLE 1.—*Results Following the Oral Administration of Solution of Potassium Arsenite to Dogs**

No. of Dogs	Solution of Potassium Arsenite, Cc. per Kg.	Mortality
13	0.50	46.1%
6	0.75	100.0%

* If the animal was alive at the end of ten days, it was listed as a "survival."

It has been stated by several authors that the toxicity of sodium thiosulphate is extremely low. The correctness of this statement for oral administration is well attested by the impunity with which large doses are used for cathartic effects; by intravenous injection into dogs, we have found that amounts as large as 2.5 Gm. per kilogram of body weight (in the form of a 50 per cent solution) seem perfectly innocuous. Being thus satisfied as to the safety of using the antidote, we carried out the first experiments by injecting it in moderate to large doses intravenously into dogs that had been poisoned by the oral administration of large doses of solution of potassium arsenite. As is obvious from table 2, the antidote does not seem to have influenced the poison, not only failing to prevent death in a single instance but being unable even to delay the fatal outcome, although it was administered immediately after the poison.

TABLE 2.—*Results Following Intravenous Injection of Sodium Thiosulphate Into Dogs Poisoned by Oral Administration of Solution of Potassium Arsenite*

Weight in Kg.	Solution of Potassium Arsenite, Cc. per Kg.	Sodium Thiosulphate, Gm. per Kg.	Results
5.6	1.0	0	Death in 20 hours
12.0	1.0	0	Death in 20 hours
10.0	1.0	0.1	Death in 20 hours
5.2	1.0	0.1	Death in 20 hours
21.5	2.0	0	Death in 19 hours
12.0	2.0	0	Death in 18 hours
14.0	2.0	1.0	Death in 19 hours
6.8	2.0	1.0	Death in 19 hours
3.0	2.5	0	Death in 10 hours
12.5	2.5	0	Death in 4 hours
6.1	2.5	1.0	Death in 10 hours
3.9	2.5	1.0	Death in 10 hours

In the next experiments, dogs were given morphine as described, and then solution of potassium arsenite, in the dose of 0.5 cc. per kilogram of body weight, was administered orally. As soon as possible after this, the dogs were treated by the oral or the intravenous or both methods of administration of sodium thiosulphate, treatment being repeated at twenty-four hour

* From the Department of Pharmacology, Medical College of Virginia.

1. Ravaut, cited by Dennie and McBride.
2. Dennie, C. C., and McBride, W. L.: Treatment of Arsphenamine Dermatitis and Certain Other Metallic Poisonings, Arch. Dermat. & Syph. 7: 63 (Jan.) 1923.
3. Semon, H. C.: An Antidote for Arsenic, Bismuth and Mercury Poisoning, Brit. M. J. 1: 662 (April 12) 1924.
4. Haskell, C. C.; Henderson, W. C., and Hamilton, J. R.: Sodium Thiosulphate in Mercurial Poisoning, J. A. M. A. 85: 1808 (Dec. 5) 1925.
5. Dennie and McBride (footnote 2). Voegtlin, Carl; Dyer, H. A., and Leonard, C. S.: On the Specificity of the So-Called Arsenic Receptor in the Higher Animals, J. Pharmacol. & Exper. Therap. 25: 297 (May) 1925.
6. Sollmann, Torald: A Laboratory Guide in Pharmacology, Philadelphia, W. B. Saunders Company, p. 322.

intervals. Here, again, the outcome was far from encouraging, the mortality being as high in the treated animals as in the controls, as may be seen from table 3.

The average mortality among the treated animals was approximately 63 per cent, as compared with 55 per cent among the untreated controls; and this in spite of the fact that the supposed antidote was administered much more promptly than would ever be the case clinically.

TABLE 3.—*Results of Sodium Thiosulphate Treatment of Poisoning from Oral Administration of Arsenic*

No. of Dogs	Solution of Potassium Arsenite, Cc. per Kg.	Sodium Thiosulphate, Gm. per Kg.	Mortality
13	0.5	0	55%
2	0.5	0.1*	100%
4	0.5	0.2*	100%
2	0.5	0.1†	50%
9	0.5	1.0†	44%
2	0.5	0.3‡	50%

* Intravenously.
† Orally.
‡ 0.2 Gm. per Kg. orally; 0.1 Gm. per Kg. intravenously.

Whatever may be the virtues of sodium thiosulphate in the treatment of the dermatitis produced by the organic arsenic preparations, there does not seem to be any doubt that it is valueless against the poisoning produced by the oral administration of solution of potassium arsenite. Our results serve again to emphasize the importance of gastric lavage in the treatment of the poisoning from any orally administered drug, and illustrate the danger of drawing conclusions as to the value of a supposed antidote solely from clinical observations when many other factors may be concerned in bringing about the patient's recovery.

SERUM SENSITIZATION RESULTING FROM DIPHTHERIA TOXIN-ANTITOXIN ADMINISTRATION

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Following the initial administration of serum (foreign protein) to patients, particularly when used in considerable amounts, reactions not infrequently occur which are described as serum sickness. These reactions develop most commonly from six to seven or more days following the administration of the foreign protein, and rarely appear earlier than the fifth day.[1] In persons who have been sensitized to serum by its administration at some previous time, the general reactions observed following the second injection of the same foreign protein often differ from ordinary serum sickness, particularly in their more prompt appearance and in their greater severity. The general reactions in serum sensitized patients may be divided into three groups with reference to the time of the onset of symptoms; namely, immediate reactions (those appearing immediately or within a few hours after the serum is injected), accelerated reactions (those appearing from one to three days after injection) and delayed or ordinary serum reactions. The onset of the delayed or ordinary serum reactions as a rule occurs with maximum frequency from one to two days earlier following the second than following the initial injection of serum. The more common occurrence of the immediate and accelerated types of reactions, together with the more frequent development of a greater severity of symptoms in persons receiving the second administration of serum, as compared with those receiving the initial injection, is generally considered to be due to the fact that the former cases have been rendered hypersensitive to this foreign protein by its previous administration. Even instances of immediate reactions described as human serum atopy following the initial injection of a foreign protein are considered to be due to the existence of hypersensitivity of unknown origin to the foreign protein used.

General reactions termed anaphylaxis occur following the injection of foreign proteins into sensitized laboratory animals, which differ in some respects from those usually seen in man resulting from the same procedure. Although these differences are observed, the reactions in man and laboratory animals have one thing in common in that they are reactions of a sensitized individual to a foreign protein. It is well known that the characteristics of anaphylaxis vary in different species of animals, but are usually the same in the same species. The variations noted have been explained on an anatomic basis. Thus, in the guinea-pig the characteristic symptoms of anaphylaxis have been attributed in part to a spasmodic contraction of the bronchial musculature, which is developed to an unusual degree in this animal. Likewise, the development of splanchnic and hepatic congestion as occurs in anaphylaxis in the dog is attributed to a spasmodic contraction of the smooth musculature of the hepatic veins, which is unusually well developed in the dog. Since the features of anaphylaxis vary in different animals, it probably is not surprising to find that the reactions to foreign protein occurring in sensitized man differ in some respects from those seen in laboratory animals. These differences may be dependent in part at least on anatomic characteristics with respect to the degrees of development of smooth muscle, particularly in strategic locations. When anatomic similarity exists in this respect, quite similar reactions are noted. Thus, in certain individuals (asthmatic) having an excessive development of the bronchial musculature, the symptoms of foreign protein reactions are often exceedingly severe and more closely resemble those of the guinea-pig. It is probably fortunate that man usually differs from the guinea-pig in this respect; otherwise the distressing symptoms of foreign protein reactions might be of far greater universal seriousness to man than they now are.

A series of seven severe reactions of the immediate and accelerated types have been described recently,[2] following the administration of diphtheria antitoxin, antitetanic and scarlatinal antistreptococcic serums to children who had been immunized previously against diphtheria by three injections of toxin-antitoxin (0.1 L+ preparations). As these children had received amounts of foreign protein greatly in excess of the minimum required to render experimental animals anaphylactic, the inference was drawn that these patients had been sensitized to horse serum by its previous administration, and the rather severe and prompt reactions observed after the subsequent injection of the same foreign protein were interpreted as being anaphy-

1. Von Pirquet, C. E.: Allergy, Arch. Int. Med. **7**: 259 (Feb. 15) 1911. Longcope, W. T.: Susceptibility of Man to Foreign Proteins, Am. J. M. Sc. **152**: 625 (Nov.) 1916.

2. Stewart, C. A.: Anaphylactic Reactions Following Administration of Serums to Children Previously Immunized Against Diphtheria, J. A. M. A. **86**: 113 (Jan. 9) 1926.

lactic in character. Park, however, prefers to designate these reactions as examples of severe serum sickness. A disagreement as to the terminology by which these reactions should be properly designated, however, does not alter the desirability of the avoidance of universal human serum sensitization particularly to horse serum, provided diphtheria immunization may be safely and effectively accomplished by the use of preparations not containing this foreign protein. The avoidance of sensitization to horse serum has become especially desirable with the introduction of antiscarlatinal serum, which, in addition to diphtheria antitoxin, will be employed therapeutically with increasing frequency in the future.

That human serum sensitization does occur following diphtheria toxin-antitoxin injection has been denied by Bauer and Wilmer.[3] Park[4] and Hooker,[5] however, report the occurrence of serum sensitization, as demonstrated by skin test, in 27 per cent of patients immunized by this procedure. In order to determine the effectiveness of the 0.1 L + diphtheria toxin-antitoxin preparation in rendering laboratory animals anaphylactic, experiments were conducted on thirteen guinea-pigs. In a group of ten of these animals given the second injection of 2 cc. of diphtheria antitoxin intraperitoneally sixteen days after they had received a single injection of 1 cc. of toxin-antitoxin, anaphylactic phenomena appeared immediately in five animals, in from twenty to forty minutes in three, and in from seventy to ninety minutes in two. The symptoms presented by the five showing a prompt serum reaction included dyspnea, sneezing, lacrimation, defecation and restlessness. Four of this group developed what was interpreted to be vertigo, judged by the fact that they ran about with the head constantly rotated markedly to one side. Three of the animals having vertigo also developed a weakness of the hind quarters to such an extent that they were unable to move about except by using the fore legs. One guinea-pig, after developing vertigo and a weakness in the hind quarters, finally became so severely prostrated that it remained lifeless and unable to move for several hours. The remaining five guinea-pigs in this group presented milder symptoms of distress; eventually all ten of these animals made a complete recovery.

A second group of three guinea-pigs was given a series of three injections of 1 cc. each of the 0.1 L + diphtheria toxin-antitoxin. Sixteen days following the last injection, each animal received 2 cc. of scarlet fever streptococcus antitoxin concentrated (Squibb) intraperitoneally. About three minutes following this final injection of serum, two of these guinea-pigs developed a series of severe clonic convulsions, ceased breathing and died. In each instance the heart continued to beat two or three minutes after respiration ceased. The third guinea-pig in this series remained perfectly well and was absolutely without symptoms of distress at any time.

Although it probably is unsafe to infer that results with laboratory animals are apt to be duplicated clinically, the record of a case, obtained through the courtesy of Dr. C. R. Moriarity, is rather suggestive:

Baby S. had been immunized by three injections of 0.1 L toxin-antitoxin, and fourteen months later developed a definite membrane on one tonsil and had a positive throat culture in spite of the fact that the Schick test had previously been negative. Although the child did not present other clinical symptoms of diphtheria, an administration of antitoxin was deemed advisable. The patient was given a small desensitizing dose, and twenty minutes later received 5,000 units of antitoxin. Within five minutes the child collapsed, ceased breathing, and became cyanotic; the pulse was imperceptible. An administration of epinephrine resuscitated the child, but severe prostration persisted for four hours. Subsequent exacerbation of the symptoms did not occur. This child had always been perfectly well previous to the present illness, and had never had an attack of asthma.

Since in this instance, as also in those that I have reported, a very exact duplicate of the procedure known to render experimental animals anaphylactic had been carried out through the sensitizing injection of a small amount of foreign protein at the time of diphtheria immunization and subsequent administration of a larger amount of the same foreign protein, it appears logical to assume that these reactions are examples of human anaphylaxis or something very closely allied to anaphylaxis. At least they are shock reactions to a foreign protein to which the individual has been sensitized by its previous administration. The occurrence of these immediate shock reactions superimposed on the toxemia to which the patient is already subjected as a result of scarlet fever or other disease certainly is not desirable. In instances, however, in which the administration of therapeutic serum to a sensitized patient is necessary, it should be given without hesitancy; but under such circumstances the physician should endeavor either to desensitize such patients by repeated small injections of serum at intervals of from one-half to one or more hours before giving the full therapeutic dosage or to adopt the measures to obviate reactions of this character. Any inclination to neglect these procedures when shock reactions do not occur on giving a second injection of serum will be changed by one severe experience. I do not wish to be interpreted as advocating a discontinuance of diphtheria immunization, but rather as pointing out the advisability of adopting a preparation containing a serum other than that derived from horses, possibly goat serum as recommended by Hooker.[5] Even a preparation of this type may be discarded eventually, provided the initial promising experiences establish that anatoxin or toxin detoxified by means of sodium ricinoleate or some other preparation may confer an immunity to this disease with equal effectiveness and safety and without horse serum sensitization.

SUMMARY

In a series of ten guinea-pigs that had received a single injection of 1 cc. of the 0.1 L + toxin-antitoxin preparation and a second intraperitoneal injection of diphtheria antitoxin sixteen days later, nonfatal anaphylactic phenomena appeared in varying degrees of severity and after different intervals.

In a second series of three guinea-pigs that had received three injections of 1 cc. each of toxin-antitoxin, prompt anaphylactic death occurred in two instances with convulsions and cessation of respiration. The third animal remained perfectly well.

The clinical case reported of the occurrence of a prompt severe reaction in a child previously immunized against diphtheria, following a subsequent injection of antitoxin fourteen months later, is an example of human anaphylaxis.

Diphtheria immunization without sensitization to serum, particularly that derived from horses, is desira-

3. Bauer, E. L., and Wilmer, H. B.: Toxin-Antitoxin: Hypersensitivity to Its Protein Content, J. A. M. A. **86**: 942 (March 27) 1926.
4. Park, W. H.: Human Hypersensitiveness to Whole Horse Serum or Serum Globulin Following Diphtheria Toxin-Antitoxin Injections: Its Importance, J. Immunol. **9**: 17 (Jan.) 1924.
5. Hooker, S. B.: Human Hypersensitiveness Induced by Very Small Amounts of Horse Serum, J. Immunol. **9**:7 (Jan.) 1924.

ble. Recent studies indicate that this end may be accomplished by the use either of antitoxin or of toxin detoxified by means of sodium ricinoleate. Until the effectiveness and relative merits of these two preparations have been fully established by extensive observation, the employment of toxin-antitoxin containing goat serum is recommended to avoid sensitizing individuals to the foreign protein (horse serum) present in the majority of the therapeutic serums at present on the market.

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CONDUCT DISORDERS OF CHILDREN*

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Conduct is defined as the way in which a person acts or lives; the doings or deeds of a person collectively considered. Behavior is conduct in its external relations to life. There is inherent in the term conduct the idea of personality and moral responsibility.

Conduct is an energy phenomenon. It is dynamic and is the sum total of the reactions of an organism in and through living. Not all the elements of conduct are visible at any one time. It floats on the sea of life like an iceberg, with the greatest bulk and the most dangerous portions of it submerged below the surface. Thus interpreted, conduct is the resultant of numerous forces arising from the interaction of internal and external factors; it is a changeable current based on the ratio of forces inherent in the biologic constitution of man and the counter resistances of the social world in which he must develop. Hence, there is in conduct the resultant of forces arising from inherited and acquired neuron pattern systems; from impulses and habits derived out of the discharge and inhibition of the emotions for ego satisfactions; from the use of the intelligence, and from the efforts to secure and maintain an adequate adaptation to a social environment.

STANDARDS OF CONDUCT

A discussion of conduct disorders assumes that standards of conduct exist. But what are the fixed standards of behavior? Ordinarily, norms are discussed as though they possessed universal application. Norms represent average or above average proportions or presentations of a particular condition, form or reaction. The progress of the world depends on variation rather than conformity to norms. In racial evolution, individual differences are more significant than regular norm reactions. Thus, all individual variations are abnormalities. Standards of conduct are matters of time-space relationships; they depend on the age in which one lives and the place where one lives. The standards of conduct for children in rural sections are not identical with those set up for urban children of the same sex and age; nor are they identical in France, Egypt, Russia, China and America.

Each age creates its own standard of conduct. It is important to recognize that standards of conduct are labile and in a state of flux. There enter into standards a vast variety of factors, such as the state of physical health and fitness, social status, economic situations, the degree of education, and the impresses of nationalism and religion. Standards are largely determined by the mores of the people, and these are constantly undergoing change. We are witnessing today striking alterations in the conduct of all generations, especially noticeable among children. Communal culture, philosophy, practices and ideals find expression in the influences of new institutions, new demands and expectations, new rules and regulations such as have arisen from the development and the applications of sciences in each age. Juvenile conduct today is affected by the greater freedom of women; the increase of public education; the establishment of new and cheap forms of amusement, and the new styles, inventions and practices of this era. Public opinion and public sentiments concerning alcoholism, housing reform, and the standards of living enter into standards of social life which, when applied as measures to individuals, represent degrees of adaptation to social living. The authority for activity is life—personal and social living.

A disorder of conduct, therefore, represents dysharmony in adaptation. It is a variation from the theoretical majority norms. Its roots may lie in the visceral and nervous systems, in intellectual incapacities, in pathologic states, or in social pressures. When one considers conduct disorders of children it is important to recognize that all conduct standards are unstable and that behind judgments concerning them there lie assumptions of numerous sanctions, such as the norms of anatomic structure, physiologic reactivity, emotional responses, economic status, and the crystallization of social ideals in ethics and religion.

Conduct deviations from the norm may be above or below the line. Thus, one may speak of tallness or shortness, hyperactive or hypo-active glandular action, lethargic or manic tendencies, hyperconscientiousness or irresponsible activity, introvert or extravert tendencies, and such disorders as are termed schizoid or cyclothymic. The appreciation, therefore, of conduct disorders is based on an assumed norm of action.

Conduct disorders in children present greater difficulty than similar disorders in adults, because children are in the process of growth and development. Their inherent individualism is being subjected to constant pressures for social adaptation. The criteria of juvenile action are usually those set by adults for harmonious living in an adult world, and acceptances of them by children are demanded prior to the development of adult capacities. This holds true at least for antisocial conduct. There is this tremendous pressure to secure conformity to group principles of thinking and acting as they are established for family life, for school groups, and for participation in social living. Children are not to be regarded as good or bad by nature. The principle of original sin is not applicable in theory or in fact as to the consideration of juvenile misconduct.

Children are to be regarded as highly integrated reaction systems. Their conduct has origins in habits developed by living experiences and the experiences of living as biologic phenomena.

Conduct itself, at whatever level, grows out of the essentials of being as well as the essentials of living. Hence, the fundamental instincts and emotions, the visceral and glandular organizations, the central and sympathetic nervous systems, and the mechanisms of intellect are vitally concerned, not merely in terms of anatomy, but with a due recognition of their physiologic and pathologic activity. Such constituent factors of being are influenced, stimulated, modified and inhibited by means of social factors emanating from homes, educational systems, religious beliefs and the social milieu.

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Youth possesses potentially the characteristics of humankind that are involved in biologic and social living. The child primarily is as definitely a social cell as he is an organization of biologic units. These two phases of his being depend on and call forth a congeries of interacting and interwoven impulses and desires. Conduct disorders thus possess biologic and social phases.

BIOLOGIC AND PSYCHOLOGIC ASPECTS OF CONDUCT

The biologic phenomena of conduct disorders are not to be divorced from the psychologic phenomena. A line cannot be drawn between physical and mental. The old aphorism of a sound mind in a sound body suggests a distinction not wholly valid. In all probability every physical state is attended by, produces or represents a mental state. Physical and mental phenomena of children are not to be regarded as separate and different forms of reaction, but are to be deemed as unitary and interdependent with different facets of manifestation. The copper of a Lincoln penny is inherent in the portrait of Lincoln contained thereon. Certain pressures have altered the copper blank so as to give it a new form and appeal; but one would not assert that the Lincoln face could be removed without altering the physical state of the copper. The facies of exhaustion of the runner is stamped on more vital material. Analogies are easily made and I cannot help referring to the variation in the appearance and characteristics of the diamond and of coal, which are merely molecular rearrangements of an underlying common element. The whole world would be changed did we but understand the process of transmuting all the elements into their different forms. The scratch of a pin, for purposes of discussion, may be divided into the penetration and separation of skin cells and the consciousness of the varying pain incident to the process. But who can indicate a line of cleavage in the two phenomena? The physical reactions of emotional distress cannot be dissociated from the emotion. The conversion of psychic disorders into somatic responses as observed in hysterical manifestations further illustrates the interdependence of physical and mental phenomena. The excitations, increased vitality and hyperkinesis due to overactive thyroid glands are as truly responsible for abnormal mental states as are the intoxications from alcoholic beverages, coffee or hasheesh responsible for vagaries in ideas, speech and actions.

One need not consider the relationship between conscious mental activity and physical reaction as in any wise different from behavior arising from subconscious activity. This is simply exemplified in the malaise, irritability and depression occurring as prodromal symptoms of various diseases, and is more profoundly evidenced in the fatigues and irritabilities expressive of the emotional disturbance that come to the surface as neuroses.

The biologic and psychologic phenomena of conduct are to be regarded as total reactions with, however, varying relations in consciousness. There are numerous levels of activity which, to some extent, indicate the phylogenic development of functions. Conduct may be at an instinctive level in which consciousness plays little part. It may be on a level on which the coercive factors are emotional, but with a varying degree of conscious recognition of this fact. Finally, conduct may be thoroughly controlled on an intellectual plane by reason of the ideas and ideals that motivate activity in terms of social living. One recognizes these three stages in the conduct disorders of children. There is the instinctive level as exhibited in tics and enuresis; the emotional level as marked by phobias and tantrums; and the intellectual plane, which often creates its own difficulties because of a conflict between personal ideas and ideals and those of society. These varying levels of conduct are not mutually exclusive, because they are in themselves interrelated, and at times all three elements are determinable in overt behavior. The socialization of children demands the regulation of their instinctive activities in terms of social utilities, and the inhibition of unfavorable emotional reactions in the interest of social adaptation. Obviously, the formation of habits through training and experience is a prerequisite to the highest form of intellectual control, in which are involved the inspirational and spiritual phases of life. Children, however, can scarcely be expected to achieve the levels of rational conduct which adults have failed to reach despite the continued social pressures of forms, etiquettes, conventions, customs, codes and mores, which increasingly affect individuals in their desire to secure social approval.

If, then, conduct is the total reactions of an organism in and through living, a child is to be regarded as manifesting shifting types of conduct during the development of his fullest integrations. The incompleteness of his development at any age period presents certain limitations to the conduct performance level. The structure, organization, functioning and reactivity of children are highly individual. Numerous factors are represented in their vital totality. I view the child as containing physical, intellectual and instinctive emotional mechanisms, which are interwoven, interbound and interdependent, so as to constitute a biologic unity with inherent social proclivities. The interaction of this biologic unity with other units somewhat similarly organized constitutes the mechanism of social forces which definitely affects and conditions the biologic unity; but this biologic unit in turn exerts a counterforce on its animate and inanimate environment. Thus, the child has an environment, is part of its own environment, and constitutes part of the environment of others. These three relationships create various and variable opportunities for biologic-social activities which in their organization constitute the total reactions at any given time and hence represent the degree of juvenile adaptation to living.

It is apparent, therefore, that any variation from the norm in the inherent protoplasmic constitution of the child may affect his social reactivity, and any shifts in social pressures may influence his constituted physical organization. To illustrate: Tallness and shortness, fatness and thinness, affect social relationships differently at different age periods. Myopia, blindness and strabismus variously affect emotional life and social reactions. Congenital hip disease, clubfoot and cryptorchidism may profoundly affect social behavior. Athyroidism, mongolism, dwarfism and gigantism profoundly affect personality and conduce to various disorders of conduct. Syphilis may determine irregular conduct as definitely as it causes keratitis, even though cerebrospinal symptoms are not discoverable. Variations in intellectual capacity, measured as idiocy, imbecility, moronity or superior mentality definitely affect physical reaction, training capacity and the level of school and vocational functioning, and modify social living. Inherited patterns of emotional reactions, of quick or slow responsiveness, definitely enter into the general conduct and, as fear, anger or love, may burst

forth into conduct disorders as dissimilar as stammering, pavor nocturnus, lying, stealing, truancy and sexual offenses.

The pressures of social factors on the inherent physical and psychologic mechanisms are represented by the effects of external environing forces, such as parental ignorance, indifference and neglect, harshness and cruelty, the limitation of recreational opportunities, and the pressures of ethical and religious doctrines and dogmas. Even the laws and customs of the land and the mores of the age bring about those challenges in a new generation which unthinking adults term revolt.

Conduct disorders are to be viewed in terms of causality rather than of symptomatology. Stealing and lying as actual conduct may not vary greatly, but their underlying causes are seldom identical. For example, the underlying basis of such antisocial practices may vary from mere jealousy to encephalitis, or from diabetes mellitus to dementia praecox. Truancy is a form of misconduct, but its causes may vary from sickliness, obesity or myopia to mental subnormality, hypersensitiveness, desire for adventure, a sense of inferiority, a maladjustment of the curriculum, a lack of intelligent parental discipline, the lure of the neighborhood or the influences of a gang.

It is equally true that similar causes operating on different reaction systems yield dissimilar effects. This naturally follows a due recognition of the dynamics of a personality. If conduct is to be regarded as a manifestation of energy, the result of numerous forces, one would expect tremendous differences in the expression of conduct in different persons with the application of the same cause. To illustrate once more: Myopia may cause fatigue, an ocular tic, nystagmus, headaches, truancy, tantrums or depression. Corporal punishment may bring about abject fear and submissiveness or aggressive disputation, flight from home, murder, or suicide. A fracture of the skull may be responsible for school failure, irritability, wanderlust or epilepsy. The lack of an allowance may give rise to disobedience, theft, or slavish devotion to rectitude and an early desire to enter a vocation. Lack of adjustment in school may result in indifference, carelessness, failure, tantrums, truancy or theft. Calling a child names may cause irritability, pugnacity, disobedience or self-isolation, flight from home or school, a sense of inferiority or a neurosis.

It is obvious that the mere statement of a conduct problem is couched in terms of symptom complexes rather than of causality. Diagnoses of typhoid, tuberculosis and malaria are reached after careful examinations which result in determining the presence of the biologic organisms. Hemorrhage or fever are not diagnoses but effects or expressions of conditions calling for diagnosis. Similarly, conduct disorders demand study in order to ascertain the underlying factor or factors that condition or primarily cause them. This, however, is a more difficult problem because of the interaction of so many variables. In general, it may be said that the conditioning factors are found in internal biologic conditions, in external environing forces, or in a combination of the two.

The internal biologic elements may be congenital or acquired. The distinction between an intra-uterine amputation or a posttraumatic amputation is definite, and the problems they produce are not identical, though similar. A congenital or acquired hydrocephalus presents conditions varying in their degree. A congenital mental deficiency or a mental impairment due to accident or disease may cause types of conduct very similar, though with differences in prognosis. The internal biologic factors may be due to structural variations, organic in character. Thus, variations in the organization of the sensorimotor systems, malformations and deficiencies in the visceral and glandular systems, and the large variety of defects and handicaps due to accidents and disease sequelae are of paramount importance.

The mental structure in terms of neurons is organic and determines the degree of intelligence. The numerous neuron patterns, constituting the mechanisms involved in memory, and the association processes, with all the ramifying relationships at subconscious and at conscious levels, cannot be directly ascertained. A knowledge of the intellectual level, as measured in intelligence tests, is necessary for an interpretation of potential neuron activity.

The basis of Adler's theory of constitutional inferiority is to be found partly at the organic structural level. Applying such terms as the neurotic constitution, prepsychotic and psychotic states does not suffice to eliminate the possibility of some structural basis for their existence. Besides the structural phases of internal biologic factors, it is essential to think in terms of functional capacity. It is obvious that alterations in structure must bring about modifications in function. Frequently, however, functional disturbances appear without the evidence of marked structural alterations. The assumption, however, that such functional variations are independent of structural change is unwarranted, because for the time being scientific methods fail to reveal the finer changes in cellular structure that another generation may easily discern. Certainly, if fatigue can make itself manifest in the histology of cells, other functional variations may occasion or result from changes even of a transient character. Some functional disabilities are known to cause as well as to accompany variations in structure. Emotional instability, hyperkinesis, psychoneurosis and numerous habits are responsible at times for structural alterations. It is possible that slight structural differences may have conditioned the appearance of the instabilities and habits at a time when their physical characteristics were unrecognizable.

The line of division between normality and the pathologic is exceedingly fine, particularly when function is concerned. This significant fact merits recognition and calls for a careful study of all the possible internal factors that may play a part in behavior. The absence of a thyroid gland represents a structural defect; the imperfect thyroid gland with consequent hypothyroidism is equally a structural and a functional deficiency. A disorder of thyroid function incident to insufficient iodine in the dietary brings about structural modifications, but some degree of thyroid enlargement appears to be normal during adolescence.

It becomes difficult, therefore, to determine how far certain forms of conduct, reflecting personality changes, are due primarily to physical changes as contrasted with psychic factors. The term psychogenic, for example, too frequently is assumed as an adequate explanation for a form of behavior without an inquiry into the psychogenesis. It is advantageous to realize that the term psychogenic in a sense conceals our own lack of scientific knowledge. So-called psychogenic disorders will be resolved into more definite entities in the course of time, just as rheumatism, eczema, inflammation of the bowels and pernicious anemia have gradually

been resolved into numerous forms of arthritis, dermatitis, appendicitis, salpingitis, bothriocephalus infection, and the like. Already we speak of the epilepsies rather than of epilepsy.

Many disorders of personality as evidenced in conduct, formerly deemed only psychogenic, are now recognized as following definitely physical difficulties, such as syphilis and encephalitis, chorea and pregnancy. The factors entering into a traumatic neuroses or a posttraumatice epilepsy cannot be attributed to the psychic factors per se, because at least physical injuries antedated the expression of psychic abnormality. To endeavor to explain the anxiety and compulsion neuroses, hysterias and psychoses in terms of intrapsychic mechanisms without regard to the possibilities of physical bases is manifestly unsound.

It is equally dangerous to assume that apical abscesses, diseased tonsils or intestinal disease are responsible for all neuroses and psychoses. It is the height of absurdity to endeavor to explain delinquency and crime merely in terms of endocrinologic disturbances. A hairy mole on the face, a Cyrano de Bergerac nose, the horrible mien of a Richard the Third, a hemiplegia, a converted sinistrality, a chorea, a syphilis insontium, an internal strabismus or an incurable tuberculosis may alter a personality so as to lay the foundation for a life of dissipation and excess, for delinquency and antisocial activity, for truancy, vagabondism, for sexual offenses, for murder, or self-destruction. To assume theories to be facts is unwise, nor is there science or reason in generalizing from particulars. Conduct is influenced by glandular dysfunctions, but not all disorders are due to this cause.

The fact remains, however, that a variety of conduct disorders have their basis in internal biologic disturbances. The boy who steals food under the urge of the increased appetite of diabetes mellitus violates a moral principle, but the basis of his difficulty lies in the factors responsible for the diabetes mellitus. The child with violent outbursts of temper, later evidencing epileptiform seizures, may have the explanation of his behavior in a birth trauma or a fracture of the skull. Marked ocular tics may have had their origin in an early keratitis, conjunctivitis or myopia. Pyromania, hypersexuality or sadistic actions may be consequences of encephalitis, or be conditioned by a limited neuron organization of the brain. Truancy, destructiveness and pugnacity may arise fundamentally from congenital or acquired mental deficiency. Hysterical seizures and a wide range of neurotic disorders may have their origins in structural and functional variations of an inadequate type.

There is growing evidence to indicate that structural build may be partially responsible for the types of diseases to which individuals are subject. There is a growing body of data that is highly suggestive of some types of relationships between constitutional physique, temperamental characteristics and behavior trends. The psychopathic personality undoubtedly has a physical basis. It is necessary, therefore, to study more carefully the possible relations between the organic and the functional characteristics of children and their exhibition of psychic activity and behavior, whether it is of a transient or a permanent nature. It is striking, for example, that epileptiform seizures are more frequent among children who during infancy evidenced spasmophilia than among children who during early life never suffered a convulsion. It is significant that some types of children are prone to exhibit vomiting, others delirium, and still others convulsions under the influence of varying degrees of fever during attacks of similar diseases. The influences of rickets, otitis, endocarditis, asthma, diseased tonsils and teeth, malnutrition and severe infectious diseases are not to be ignored. Every illness affects the entire child. Even flatfoot with resultant fatigue cannot be ignored in weighing the physical evidence that bears on juvenile activities. Thoughts and actions, ideas and performances, ideals and character are molded in part by the interactions of the various systems constituting the human body.

Careful account, therefore, must be taken of all the biologic phenomena represented in conduct disorders, in arriving at a possible cause for them.

SOCIAL STIMULI PRODUCING CONDUCT DISORDERS

It is apparent that the external social factors become vital as stimuli for the children regarded as reacting systems. If I may assume that children possess multiple responses to similar stimuli, depending on time, place and circumstance, it is patent that children tend to reflect varying personalities under differing conditions. Obviously, then, the conduct reactions of children are not identical in the home, at school, and with their self-selected companions. Different phases of their personalities are affected by the environing conditions. Their tendencies to be individuals are in conflict with the demands that they conform to the varying codes of their enlarging contactual world. Parents are not self-selected by children, nor are their homes. The parent-child relationships, the brother-sister relationships are of vital significance in terms of self-preservation, ego satisfactions, and the expansion of personality. It is essential, therefore, to investigate the home setting. Variations in parental traditions, education, ideas and ideals create numerous possibilities for aiding and retarding the normal development of children. The degree of parental affection and understanding, reciprocal marital attitudes, privacy of the home, economic status, background of the home, health of the parents, degree of cooperation within the home, and relative feelings of the parents toward the respective children merit consideration.

The resentful, disobedient child, who is reacting to constant nagging and corporal punishment, is not rare. The sullen, annoying, pugnacious child, who is seeking to secure a larger portion of the attention more freely lavished on a brother or sister, is frequently seen. There are children who develop hysterical blindness and deafness as a defensive reaction in homes where parental relations are harsh, bitter and cruel. Conduct based on fear, jealousy and anger have some of their toughest roots in the soil of familial relationships. Patently, the relief of such conduct disorders cannot be secured by attention only to the inherent internal physical constitution of the child. The alteration of the familial situations gives rise to a new social setting which induces a more satisfactory set of responses. The altered emotional states bring about modified behavior.

In the home, thought also must be given to the disciplines exacted by governesses and servants, to forms of teaching that are utilized to exact obedience and quiet, to the religious beliefs implanted and the ethical principles emphasized. One notes frequently dire results of fears and doubts thus implanted, resulting in worry, obsessive ideas, compulsive thinking and acting, and not infrequently serving as a lever in producing mental confusion and possibly inaugurating

psychotic states. A young child who had a bedtime ceremonial demanding the attendance of various members of the household and revolving about the idea that she might not awaken in the morning or might awaken blind was found to have the condition as the result of the stupidity of a nurse who had told the child that God sometimes punished disobedient children by blindness and even death. A masturbating boy was given the idea of the sinfulness of his act and was sent to church to seek God's aid. Soon thereafter he began to have seclusive tendencies, and gradually developed doubts and confusion of ideas as his practice continued despite his appeal to the Deity, with a culmination in a psychosis at the age of 13 years.

The desire for parental affection is natural during childhood. Its universality and its general gratification lead one to view with great caution the assumptions that the Oedipus and Electra complexes are particularly significant in occasioning juvenile misconduct. With a profound and fanatic belief in the freudian theory, it is possible to read this interpretation into all misconduct. In my own experience, I have found the psychanalytic approach valuable but not in terms of any specific theory of psychic action. Not a single school of psychanalysis, mental exploration or psychopathology is to be regarded as proved. There is much of value and suggestion to be gleaned from the studies and investigations of all the psychanalytic schools, and due thought must be given to the varying points of view of Freud, Adler, Jung, Stekel, Eichhorn and others, though, for the most part, their investigations have been based on the study of the neuroses and largely limited to experiences with late adolescents and adults. There is a vast difference between interpreting the conduct of adults and that of children, whose neuron pattern organization is in process of growth and development.

The failure of parents to recognize and appreciate their relations to children leads to protracted efforts at overcontrol. The intrafamilial conflicts that arise from the thwartings of youth, the limitations of power, the overdirection of activities, the control over friendships, the demand for implicit obedience and the resistance to the natural expansive forces of children's internal growth provide numerous occasions for challenging and defying authority. From such frailties of parenthood emerge disobedience, stubbornness, hatreds, angers, tantrums, lying, theft, and running away from home. Parental overcontrol is as hazardous as undercontrol. Parental fears factoring as oversolicitude weaken character, lead to undue dependence, promote introspection, arouse doubts, and induce a large variety of neurotic disorders.

Schools are responsible for a large variety of conduct disorders incident to clashes with pedagogic personalities and the inelasticity of school curriculums. There are sad and startling results from the maladjustments of intellectual potentials and educational demands. School failures, as factors in inducing a sense of inferiority, bring in their train a vast variety of behavior difficulties whose manifestations depend largely on the degree of introversion and extraversion involved in the specific personalities. Teachers, subjects, school companions, rules, regulations, examinations and disciplines are far more important than most other elements in school hygiene. The school world has its currents and eddies, its deserts and shifting sands, its jungles and arid plains, over and through which children must swim, crawl and struggle to reach some goal that is said to be desirable. The slow and the quick, the dull and the bright, the stupid and the brilliant, the defective and the genius, along with the crippled, the mute, the blind, the deaf, the diseased, the neurotic and the prepsychotic are seeking their levels in schools, in education and in social relationships. Children are born neither free nor equal and the schools make the truth too apparent, but often at great sacrifice of children. The outraged, humiliated, crushed, angry, disgusted or depressed child finds an outlet in conduct as certainly as does the one whose brain power is never utilized adequately or the one who is satisfied with colorless mediocrity.

There is therefore necessity for an appreciation of the child at school. One boy becomes truant because the teacher slaps his face; another because he is failing in school achievement; and a third flees because he finds the classroom too tame to satisfy his desire for adventure. One child steals at school because he believes that by this means he will be expelled; another annoys the class in order to gain a larger measure of the attention of an attractive teacher; a third becomes disorderly as the result of false and unfounded accusations or to work off a grudge for having been called dumb or stupid.

Companionships develop a large variety of social pressures that are most especially marked during adolescence. A new group of social loyalties grow up around a nucleus and form a special code. The basis of gang union may be a similarity in ideas and interests, or the purpose of securing the protection of larger and stronger individuals, or the promotion of homosexual practices. One boy steals at the demand of his gang because of a fear of the consequences of nonperformance; another one steals in order to evidence his temerity and to gain the favor and approval of his crowd. One becomes a bully in the group in defense of his own cowardice, while another acts as a leader but fastens the responsibility for wrong doing on his followers. At times the influence of gang relationships are not immediately manifest but may appear later in life in an outbreak of delinquency as the result of a prolonged mental conflict. Occasionally, theft and arson may be substitutions for earlier associated sexual offenses that violate accepted ideals of activity. Gambling, the competitions for recognition and achievement, the pressures of social reaction against aggressive personalities or the submissiveness of suggestible make-ups markedly influence conduct. The relationships and activities in companionship indicate numerous trends and cast light on various inferiorities and defense mechanisms, but they also reveal some of the dynamic outgrowths of the motivation in life that bids youth seek for independence, success, recognition, power and achievement.

One must recognize those more intangible social forces that arise from the community attitudes crystallized in traditions, conventions, regulations, laws, ordinances, codes and mores. The progress or change of present-day communities has resulted from scientific advancement, and from urbanization and industrialization, and has created social pressures which subject the new generation to forces that were nonexistent in the generation of their parents' youth. This explains an increased variety of conduct disorders in the light of social differentials. Each advance in social organization involves new laws. The passage of a mandatory education law created truancy as wrong doing; the limitations of recreational opportunities made ball

playing in the streets a misdemeanor. The passage of the Volstead Act did not bring any greater problems to adolescents than to their parents. Communal disregard of existent laws promotes violation of all authority and fosters an attitude of irresponsibility toward regulative enactments and parental injunctions. What is right in one community may appear to be wrong in another, and vice versa. In every form of misconduct there is a saving grace, and bad behavior is largely dependent on a social code, which children do not accept in response to adult demands.

One might extend an enumeration of the external social forces, so as to include an infinite number of factors involving climate, temperature and humidity; the frequency of unusual conditions such as earthquakes, tornadoes and floods. The entire cosmos factors in the individual, and the individual is constantly striving to master the universe.

For the most part external and internal factors function concomitantly in conduct and its disorders. The biologic and social phases of the child's personality are coexistent if not coterminous. Children are not living in vitro but in sociis. The constant variation in the intensity and duration of external and internal stimuli brings about different situations of response. The frequency of responses to particular stimuli is involved in the development of habits. There is need, therefore, to distinguish between single episodes occurring under pressure and the more or less definite trends of children that result from habituation. It is likewise desirable to recognize the immediacy or delay of stimulus-response reaction. Delayed reactions may be incident to subconscious activity and diversion of energies of emotional conflicts into unusual channels. Most emotional disturbances of children express the results of a clash between internal and external forces.

In practically all emotional outbursts there is need for distinguishing the elements that enter into the fore-period of its development, and those that are found as residua in the after-period. The outburst itself appears to be of least importance from the standpoint of ascertaining the conditioning factors entering into it and the reconditioning factors emanating from it.

It must be clear that the basis of the diagnosis and treatment of conduct disorders of children consists of a careful study of the child in his setting. The child and the setting are to be examined separately and as a unit. One needs to approach the problems without ethical bias or tyrannous moral judgments. There is little place for absolutism in the mode of approach to the child; nor is there need for a fixed doctrine of causation; nor is there a regulative principle of routine therapeutic necessities. Each child constitutes a specific problem. The effects of rest cures cannot be asserted to be better than occupational therapy; the use of glandular extracts is not more certain than applications of the roentgen ray; dental extractions and tonsillectomies cannot be counted on any more than an increase of nutrition. Mental deficiency is not to be assumed to have greater etiologic importance than superior intellection. There is little excuse for the assumption of universal Oedipus and Electra complexes. A fixed belief in constitutional inferiority as a cause is little more helpful than to view conduct as a determined behavioristic phenomenon. One must therefore approach the entire subject frankly and openly, with a view to ascertaining such facts as may in themselves suggest a rational, individualized approach, such as each child merits for the solution of his problems.

A survey of the child results. One can evaluate personal origins in terms of heredity with all the exhibited eccentricities, peculiarities, neuroses, psychoses, epilepsies and mental deficiencies in his forebears. One can appreciate the nature and physical organization of the individual child in terms of his past and present medical and psychologic history. One gains an insight into his emotional and social relationships through the facts derived from his personal relations in the home, at school, and in the customary groups of companionship. His general trends in thought, temperament and action, his habits and practices are gleaned from the gathered facts relating to his world of contact and experience. With such a variety of material available, one has the analyzed substance which requires synthesis in order to provide a complete picture of the total situation. A new evaluation of the child in his setting ensues, and one is able to interpret the conduct in terms of his potentials, limitations, opportunities, the thwartings and suppression of his activities, and the character and duration of his exposure to economic, social and moral forces.

The process of correction of undesirable conduct trends or disorders depends on a recognition of the dysthenic and dysgenic factors and a subsequent effort at eliminating them through reconditioning the total situation. The physical defects and handicaps demand the appropriate remedial and prophylactic treatment; the intellectual factors call for more adequate educational and vocational adjustments and adaptations; the emotional difficulties require the establishment of a less exacting environment and the provision of more abundant opportunities for the enjoyment of life through personal comfort, pleasure and satisfaction. The social weaknesses are offset by the development of new occasions for such increased satisfactions as arise from a better balance of the reactions growing out of the basic ego, herd and sexual instinctive mechanisms. Thus one brings about a manipulation of the environment and of the body in the environment. This alteration of the biologic and social forces through their interaction secures mutual adaptations that lead to a readjustment of the patterns for activity.

SUMMARY

The conduct disorders of children may be occasional, periodic or habitual. Their antisocial characteristics vary with time, place and circumstance as well as with the age of the children. The process of character formation is a by-product of living, and conduct is one phase of the expression of its development. Whether approaching the problems of conduct as a general practitioner, a pediatrician or a psychiatrist, one is confronted by the fact that a human being is being treated and that his problems arise from the fact that he is human as well as from the fact that he is a physical being. Conduct disorders are nonconformities of individuals inadequately adjusted in their environment. The problem is to seek the cause of the difficulty. Children are only parts of their own problems. It is wise to think of the degree to which society functions in creating the difficulties of individuals. Rebellion, when successful, becomes revolution; a hero usually arises through success. The conduct disorders of children have in them the elements of the heroic, but the hero is often lacking. The conduct disorder must never be the object of treatment—one must treat the whole child in the total situation.

264 West Seventy-Third Street.

CARBON MONOXIDE POISONING FOLLOWING ETHYLENE ANESTHESIA

FINAL REPORT *

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Immediately following an accident with ethylene last spring, we made a preliminary report [1] with the hope of preventing a similar happening. Fortunately, similar accidents have not been reported. The question is raised, however, whether there may not have been certain untoward experiences due to carbon monoxide in other clinics, which were attributed to other factors because the toxic concentration of this impurity in the ethylene administered was not suspected.

While some of the early investigators of ethylene noted the presence of carbon monoxide [2] in the samples of gas they were examining and recognized its dangerous properties when inhaled, yet in the classic reports of Luckhardt [3] and his co-workers, on which is based the present use of ethylene for anesthesia, the occurrence of carbon monoxide in ethylene as an impurity is referred to in only a general way. On reviewing this work and the reports of others who followed, one gains the impression that the infinitesimal percentage of carbon monoxide present in the ethylene used, as shown by most of their analyses, may have engendered a false sense of security. Also, the possibility of toxic concentrations of this impurity was lost sight of by most of the pioneers in the use of the new anesthetic.

In Pittsburgh is a research and experimental laboratory of the United States Bureau of Mines, with probably one of the best equipments as to quality of personnel and physical plant and apparatus, for gas analysis, to be found anywhere. Mr. W. P. Yant, associate chemist at the bureau, both as collaborator with Dr. R. R. Sayers and alone, has made a series of investigations on various poisonous gases, including carbon monoxide,[4] with reference to their hazard in modern industry and everyday life. These investigations were conducted on a large scale, and, as nearly as possible, under the same practical conditions as those found in the particular activities being studied. One of us was fortunate in interesting Mr. Yant in this problem, and, having first secured authority from Washington, samples of all the various lots of ethylene at hand were submitted to the bureau for analysis. Mr. Yant's report will be freely quoted from.

* From the surgical and laboratory departments of St. Francis Hospital and the U. S. Bureau of Mines.

* Owing to lack of space, this article is abbreviated here. The complete article appears in the authors' reprints.

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CHEMICAL EXAMINATION OF GAS SAMPLES

In view of the tests made on the blood of three patients showing toxic symptoms following the administration of ethylene at the St. Francis Hospital, April 5, 1926; the symptoms attending the exposure of guineapigs to this gas; the examination of their blood, and the specific blood tests made for carbon monoxide, it was decided to make a more detailed chemical examination of the product. Accordingly, seven samples representing two separate brands of ethylene were analyzed. Five of these were the same brand (known later in the report as brand A) of a commercial product used in administering anesthesia in the cases described, one of the group being from the identical bottle used for cases referred to in the former report,[1] and the other two from the same batch as designated by the manufacturer's file number on the bottle. Each of the remaining two samples of this brand were from different batches, similarly designated by file number.

Two samples of the second brand (known later as brand B) of ethylene used for producing anesthesia were analyzed for comparative purposes, and to supplement the investigation to include the only other brand known by us to be used in the Pittsburgh hospitals.

The samples were taken directly from the original containers. Some of the bottles were full and previously unopened, others had been partially used; but in all cases they were under positive pressure, thus insuring against external contamination.

RESULTS OF CHEMICAL ANALYSIS

Carbon Monoxide.—Samples 1, 2 and 3 were from the same batch, as indicated by the manufacturer's file number, and 1 and 2 were analyzed by different laboratories and analysts and by a slightly different procedure from that used in 3. However, the amounts of carbon dioxide found are in fair agreement, in view of the fact that those for 1 and 2 are subject to an absolute analytic error of approximately 0.3 per cent. Some difference in the actual compositions might be expected if the gas in these bottles represented different portions of the batch. As a result of the presence of liquid ether in the bottles, the proportion of ether vapor to ethylene and its accompanying contamination products would increase as the pressure in the cylinder decreased. In fact, at atmospheric pressure and room temperature, the ether vapor content could increase to about 75 per cent of the total gas composition. This tendency for dilution of the ethylene would markedly reduce the percentage of carbon monoxide in the gas at low pressures from that which would be in the gas when released from lighter pressures in the bottle.

However, in all three samples of this batch, the amount of carbon monoxide found in the gas was more than sufficient to cause the symptoms and the result in the cases of the accidents reported last spring. In fact, the presence of 0.5 per cent in normal air will cause unconsciousness in from five to ten minutes and death in from twenty to forty minutes.

In the process of producing anesthesia by inhalation of ethylene, the oxygen content is usually reduced to from 12 to 15 per cent, in which case the effects of a given concentration of carbon monoxide would be increased as a result of the partial pressure of the oxygen being below that occurring from a similar concentration in air.

Needless to say, the amount of carbon monoxide found is far in excess of the lethal concentration and

could cause death after from ten to fifteen minutes of continuous inhalation.

The amount of carbon monoxide found in samples 4 and 5, which were of the same brand as 1, 2 and 3, though each from different lots, was 0.011 and 0.020 per cent, respectively. This is not enough to cause death or even marked symptoms after several hours' exposure. On the other hand, since 0.011 per cent in air would cause a saturation of approximately from 5 to 8 per cent of the hemoglobin with carbon monoxide at the end of an hour's exposure, and 0.02 per cent carbon monoxide saturation of from 10 to 12 per cent after a like time, it does not appear desirable to have even these relatively small amounts in gas used for anesthetic purposes. These percentage saturations of the blood as given for air would be distinctly augmented by the reduced partial pressure of oxygen in the use of ethylene.

Samples 6 and 7 represented another brand of ethylene. Sample 6 did not contain any carbon monoxide (less than the limit of the method of detection 0.001), and sample 7 contained 0.001 per cent. These are apparently insignificant quantities. On the basis of our present knowledge of carbon monoxide poisoning, they will not cause deleterious effects after many hours of exposure.

Ethylene.—The ethylene content of samples 1 and 2 are actual absorptions in sulphuric acid. That obtained for 3 was secured by subtracting the volume of the permanent gas fraction from 100 (ex-residue obtained after refrigeration).

Sample 5 indicates a higher grade product as regards ethylene content and absence of methane, the carbon monoxide being already considered. Samples 6 and 7 (brand B), show a small permanent gas content, and indicate an approximately 99 per cent purity of ethylene, though it should be stated in this connection that separation of this fraction but not tests for its components were made. It did not, however, have the ether odor noted in brand A.

Oxygen and Nitrogen.—These elements were found in distinct amounts in all samples of brand A analyzed for them, and in less amounts in samples of brand B. In general, the proportion of oxygen and nitrogen is similar to that of normal atmospheric air (1 part of oxygen to 4 parts of nitrogen), though in all cases excepting perhaps sample 6, which did not contain carbon monoxide, the amount of oxygen is a little less than the proportional amount. The deficiency increases with the amount of carbon monoxide. This does not wholly substantiate the possibility that some of the oxygen was consumed in the formation of carbon monoxide, because the deficiency could very readily be caused by oxidation of the walls of the iron bottle during storage. The reactions giving rise to the liberation of carbon monoxide are irrelevant to the primary object of the investigation; hence the study was not aimed in that direction. It would require a more complete study of the point of entrance of the air; i. e., whether in the reaction chamber, in the process of compression, or as a residual in the containers before filling. It would also be necessary to know whether or not oxygen is supplied by decomposition of the material used in the process, as ether $(C_2H_5)_2O$) for brand A, and alcohol (C_2H_5OH) for brand B. The fact remains, however, that air enters the system at some place, as is shown by the presence of nitrogen. This element does not occur in any of the materials alleged to be used in the manufacturing process.

Methane and Hydrogen.—The high methane content of sample 4 is an outstanding observation; for the reasons given, the major portion would be condensed in the ethylene fraction, yet analysis of the residual fraction showed 86 per cent methane, which, when calculated to the basis of the original sample, was 11.65 per cent. This constituent may be considered along with hydrogen as being evidence of decomposition or "cracking" of hydrocarbons, and that secondary reactions are taking place in addition to the primary one of forming ethylene. It might be added that carbon monoxide is an almost universal concomitant of hydrogen and methane, if oxygen is present when the decomposition or cracking reactions take place. Carbon dioxide usually accompanies these reactions, but, for the reasons given, was not determined in this study. Also the formation of aldehydes and peroxides may be attributed to these secondary or side reactions.

SUMMARY

In view of the observations made in administering ethylene to produce anesthesia, the experimental work with guinea-pigs, and the results of the chemical analysis of seven samples of ethylene representing two commercial brands used in the hospitals of Pittsburgh, the following statements regarding the purity and manufacture of ethylene are justified:

1. A certain lot of a commercial brand of ethylene contained from approximately 1 to 2 per cent of carbon monoxide, a concentration that would produce unconsciousness in from four to seven minutes, and death in from ten to fifteen minutes.

2. Other lots of this brand contained smaller but not negligible amounts of carbon monoxide.

3. Assurance is lacking that lots of this brand may not be made that would contain even greater amounts of carbon monoxide.

4. All of the five samples of this brand that were examined contained products that indicated side or secondary reactions tending toward contamination of the product.

5. The wide variation in the composition of this brand shows that the fundamental control of the process is not understood or is not properly carried out.

6. This particular brand of product is not properly purified and tested before being placed on the market.

7. Two samples of another commercial brand contained carbon monoxide in mere traces, which are not significant as regards its safety for use in anesthesia.

8. Although significant amounts of carbon monoxide were not found in the latter brand, traces of products of side or secondary reactions were noted which justify precaution in the manufacture and adequate testing of the product before it is placed on the market.

9. In view of the known methods of purification that would be applicable to ethylene, apparent reason is lacking why it should not be manufactured in a high state of purity. Competitive manufacture should not take place at the expense of purity.

In making these analyses, attention was confined almost wholly to investigating for carbon monoxide. Much of the foregoing data is irrelevant to this main object, but was obtained incident to this study and it was thought that the information would be of some value in contributing to the general knowledge of the manufacture and composition of ethylene for anesthesia. A complete analysis of the products was not attempted.

We wish to acknowledge the excellent cooperation and assistance of the company manufacturing brand A ethylene. At its initiative, all the gas was recalled from customers and its sale suspended. Without reservation, the company gave information concerning the process of manufacture. The St. Francis, West Penn and Magee hospitals of Pittsburgh furnished the samples for analysis.

It may be appended to this report that the Bureau of Chemistry, Division of Foods and Drugs, is at present conducting an investigation of anesthetic materials. It was advised of the foregoing observations and has included ethylene in its study. Dr. S. Palkin, chemist, in charge of the anesthetic investigation, has recently conferred with the Bureau of Mines regarding methods for testing and analyzing ethylene for dangerous and deleterious constituents.

PURE ETHYLENE

Concluding the observations on the production of ethylene, we will merely add that we now have an ethylene in which we have confidence and on whose chemical purity we can safely rely. It is extremely satisfactory as regards its physical property of flowing through the valves of the inhalation apparatus. This gas is being used in our work and seems to be satisfactory in every way clinically. For the time being, the purity of each individual cylinder is being checked, by the methods outlined above, in the hospital laboratory, under the direction of Dr. W. S. McEllroy, professor of physiologic chemistry at the University of Pittsburgh.

Immediately following our preliminary report, certain manufacturers started to certify each cylinder of their gas as containing less than toxic quantities of carbon monoxide; but if an absolutely pure ethylene can be produced, at a reasonable cost without carbon monoxide content, it will go far in restoring confidence and extending the use of this wonderful, safe and efficient anesthetic. There is ever an element of fallibility in human effort, including the performance of chemical checks and tests, and the best safeguard against any hazard is the complete elimination of that hazard.

CLINICAL USE

As to the clinical use of ethylene, we have little that is new to add to the accumulated observations and numerous details of technic that have been published from time to time by other clinicians. In his own work, the excellent methods of practice formulated by Dr. John Lundy of the Mayo Clinic, Rochester, Minn., have been followed very closely, and his observations as published [5] are in general the same as ours. Dr. Lundy's method of application of the principles of carbon dioxide stimulation and respiratory control, as developed by Yandell Henderson and others,[6] is a practical and finished step that marks an advance in anesthetic practice almost as important as the introduction of ethylene itself.

The adaptation of the Gwathmey type machine, which bears Dr. Lundy's name, is a most simple, flexible and efficient piece of apparatus. Multiplicity of gages, or of delicate and intricate moving parts to get out of order and require frequent adjustment, has been eliminated. The sight feed is simple and efficient, and as accurate as need be for clinical purposes. The amount of rubber has been kept down to a minimum, which makes for cleanliness, low cost of upkeep and replacements; nor are there any mesh retaining bags to collect dirt and possibly build up a static charge through to-and-fro friction on the rubber within.

In common with others, we have had some trouble due to freezing of the gas at the discharge orifice of the control valve, which produces an irregular flow of gas. We have been able to overcome this difficulty by applying a hot water bag to the base of the valve. This hot water bag cools quickly and necessitates the trouble of frequent refilling, but we have not had the courage to use any electric heating device for fear of the possibility of a spark coming in contact with and detonating the ethylene. Then, too, with electric heating devices there is the danger of overheating to be considered and "cracking" of the gas as it goes through the orifice, resulting in the formation of undesirable decomposition products. We also find our difficulties from freezing growing less as our anesthetists become more skilled in the administration of ethylene, and we can cut down the volume of flow and still maintain a satisfactory anesthesia. The newer ethylene, mentioned above, is anhydrous, so there is not any irregularity of flow due to the freezing of aqueous vapor.

We feel that ethylene can be used to best advantage in a sequence: beginning with nitrous oxide, which, because it is odorless, has a tremendous psychic advantage in the induction of anesthesia with most patients, and following with ethylene as the patient loses consciousness. The anesthesia is then maintained with ethylene and reinforced with small amounts of ether to secure such relaxation as may be necessary in abdominal work. Of course, oxygen and carbon dioxide are given in such quantities as may be indicated. We feel that the addition of a small amount of ether (even in poor risks) is preferable to the condition of deficient oxygenation which is so frequently seen when gas anesthesia (either ethylene or nitrous oxide) is forced, in in an attempt to relax certain difficult cases.

Our anesthetists have not yet reached that dizzy eminence of skill where they can with satisfaction to themselves, or the operator, handle every case on gas alone without occasionally resorting to the assistance of ether. But because of the fact that ether and ethylene are chemically related and that ether vapor diffuses very quickly and thoroughly in ethylene, the sequence is not so abrupt, nor apparently is so much ether required to obtain the desired results as in the nitrous oxide ether sequence without the ethylene intermediary.

As we became acquainted with ethylene, we found ourselves approaching bad operative risks with a great deal more equanimity than heretofore. There were less postoperative troubles, and during a winter when colds and pneumonias were prevalent, practically not any pulmonary complications.

EXPLOSIONS

That there is a definite hazard from explosion associated with the use of ethylene was soon demonstrated to the profession by several severe accidents as its adoption became more general. Some of these accidents were due to gross ignorance or negligence, in that the ethylene was administered in the presence of cautery, flame, or other known sources of ignition.

5. Lundy, John S.: Carbon Dioxide as an Aid in General Anesthesia, J. A. M. A. **85**: 1953 (Dec. 19) 1925.

6. Henderson, Yandell; Haggard, H. W., and Coburn, R. C.: The Therapeutic Use of Carbon Dioxide After Anesthesia and Operation, J. A. M. A. **74**: 783-786 (March 20) 1920. Henderson, Yandell; and Scarbrough, M. M.: Acapnia and Shock: VI. Acapnia as a Factor in the Dangers of Anesthesia, Am. J. Physiol. **24**: 260-286, 1910.

The cause of others is less apparent, but in light of our rapidly increasing knowledge of so-called static charges of electricity, these other accidents have properly been attributed to sparks from disruptive discharges of that source of energy.

This is hardly the time or place to discuss the pure science of static charges. Dr. Isabella Herb [7] and Dr. E. I. McKesson [8] have both made detailed investigations and have given us some very practical suggestions for overcoming this hazard. While we hardly feel that the elaborate ground wire system described by Dr. Herb is entirely necessary in a humid climate such as Pittsburgh, we independently arrived at and agree with about the same practice that Dr. McKesson has outlined, the principle of which is the neutralizing of static charges by systematic contact of the anesthetist with all surface capacities in the vicinity of the operation before turning on the gas flow, and the preventing of accumulation through friction of the gas flow, by washing out the rubber before and after the operation. This principle should be known and applied in every operating room where inflammable gases or vapors are used for anesthesia.

All electric wiring to fixtures in the operating room should be provided with properly certified ignition proof switches, and only certified ignition proof motors used on power driven instruments.

There is urgent need for the investigation of the ignition hazard of both ether vapor and ethylene under practical operating room conditions, as opposed to theories, such as has been done on the hazard of explosive gases and dusts encountered in general industry.

The handling of oxygen tanks under certain conditions may be attended by explosion and injury. We do not know of such accidents happening in the operating room, but several accidents have occurred in industry in which the oxygen tank has exploded either because the workmen attempted to oil the valve to make it open easily, and the film of liquid petrolatum came in contact with the oxygen under high pressure, producing an explosion and severely burning the workman; or, as in another case, because the oxygen was turned on suddenly, throwing its full pressure on the valve. The face of the valve promptly blew off and sufficient combustible material was present to initiate a flame which shot from the orifice of the tank and burned the workman severely. Extreme care should be exercised in the opening of gas tanks under high pressure, and the operator should stand to one side and not directly in front of the pressure gages. Oil should not be used to lubricate any oxygen valves.

CONCLUSIONS

1. It has been found that there is danger of carbon monoxide poisoning in the use of ethylene for anesthesia.

2. Analyses of a number of samples of ethylene marketed for anesthetic purposes show the presence of carbon monoxide in amounts ranging from traces to poisonous quantities, indicating the inadequacy in the method of preparation of ethylene safe for anesthesia. All drugs used for anesthesia should be analyzed and their purity properly certified. In the case of ethylene, when the possible presence of even a trace of carbon monoxide may be inferred, the analysis and certification should be for each individual container from which the ethylene is used, and the absolute quantity of carbon monoxide permissible in any container should not reach that which would produce toxic symptoms should it happen to be administered all at one time; for, under certain physical conditions, carbon monoxide may separate out from the ethylene and reach the patient in higher concentration than is usually interpreted from the relative figures given in percentages.

3. There is a reliable method of testing for carbon monoxide in ethylene.

4. By the method of purification known as fractionation, an absolutely pure ethylene, so far as carbon monoxide is concerned, can be obtained at a reasonable cost; by using this process, a source of supply from certain natural gases can be made available.

5. Clinical observations suggest that a technic of administration can be developed which greatly minimizes the danger of explosion and renders the administration of ethylene reasonably safe.

Carnegie Building.

7. Herb, Isabella C.: Explosions of Anesthetic Gases, J. A. M. A. 85: 1788-1790 (Dec. 5) 1925.

8. McKesson, E. I.: How Can We Eliminate Static from Operating Rooms to Avoid Accidents with Anesthetics? Read before Round Table Conference, American Hospital Association, Louisville, Ky., Oct. 19, 1925.

CALCIUM CONTENT OF PUS

COMPARISON OF DISCHARGE FROM EARS WITH AND WITHOUT BONE DESTRUCTION

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Some time ago, it occurred to one of us (I. F.) that the purulent discharge from suppurative otitis media and mastoiditis might contain the products of bone disintegration and thus give evidence of a destructive process in the bone. As we were unaware of such work having been done with this point in view, we recently commenced making chemical analyses of pus from various sources, and also of pus from discharging ears. The first problem that we set ourselves was to determine the calcium content of pus from ears with frank bone necrosis, and compare it with the calcium content of pus from ears without demonstrable bone necrosis and from abscesses elsewhere in the body. Although our material is entirely too meager to warrant any definite conclusions, our results have been so strongly suggestive that we believe it advisable to make this preliminary report in the hope of stimulating further observations in this field.

We have examined pus from various suppurative diseases, and have obtained the results given in the accompanying table, one or more determinations being made on each specimen.

The pus from the ear canal should be collected only after the canal has first been wiped dry, cleansed with weak alcohol solution, and, after drying again thoroughly, plugged with nonabsorbent cotton, the inner end of which is lightly smeared with petrolatum.

At first our determinations were made with the Kramer-Tisdall method. At present we are using a microcolorimetric method devised by Dr. Theodore Kuttner of the Chemical Laboratory of Mount Sinai Hospital, which checks up accurately with the titration method. This method will be described in a forthcoming publication.

The concentration of the discharge and its evaporation, the comparative chemistry of the cellular and fluid elements of the pus, the carbon dioxide content of the discharge, the quantitative determination of the constituents of the discharge by ashing and weight, and other questions collateral to the main investigation are still being pursued.

It is seen from the data of cases in which this test has been made that there has been an astonishingly close parallel between the amount of calcium in the pus and

Results of Examination of Pus

Case	Specimen	Source	Nature	Roentgen-Ray Evidence of Bone Necrosis	Operation	Diagnosis	Calcium Content, Mg. per 100 Cc.								
							Kramer-Tisdall	Kuttner	Kramer	Kuttner	Kramer	Kuttner	Kramer	Kuttner	Kuttner
1	Pus	Broncho-scopic aspiration	Thick mucopurulent	0	0	Lung abscess	6	..	..	..	..	..	..	..	..
2	Pus	Broncho-scopic aspiration	Thick mucopurulent	0	0	Lung abscess	7	..	..	..	..	..	..	..	..
3	Pus	Pleural puncture	Thick purulent	0	No evidence of bone necrosis	Empyema	5	7	..	..	..	..	..	..	..
4	Pus	Pleural puncture	Thick purulent	0	No evidence of bone necrosis	Empyema	8	6	..	..	..	..	..	..	..
5	Pus	Pleural puncture	Thick purulent	0	No evidence of bone necrosis	Empyema	7	8	..	..	..	..	..	..	..
6	Pus	Aspiration of knee joint	Thin	0	No evidence of bone necrosis	Pyarthrosis	1.5	..	(4 days later) 5	..	..	..	..	..	..
7	Pus	Aspiration	Moderately thick	0	Incision and drainage	Liver abscess	5.5	..	..	..	..	..	..	..	..
8	Spinal fluid	Lumbar puncture	Thin purulent	0	0	Meningitis	7	..	(1 day later) 7	(2 days later) 8	(2 days later) 7	..	..	..	..
9	Spinal fluid	Lumbar puncture	Thin purulent	0	0	Meningitis	6	5	(1 day later) 7	..	(1 day later) 6	..	..	..	..
10	Spinal fluid	Lumbar puncture	Thin purulent	0	0	Meningitis	6	7	7	6	8	..	..	..	..
11	Spinal fluid	Lumbar puncture	Thin purulent	0	0	Meningitis	..	6	..	7	..	(3 days later) 8	..	..	..
12	Pus	Acute suppurating glands of neck	Thick purulent	0	Incision and drainage	Suppurative adenitis	3	..	..	..	..	..	..	..	..
13	Pus	Antrum of Highmore	Thick purulent	0	Suction of pus from antrum	Acute antritis	..	20	..	..	..	..	..	..	..
14	Pus	Antrum of Highmore	Thick purulent	0	Suction of pus from antrum; long after operation	Chronic antritis	..	18	..	..	..	..	..	..	..
15	Pus	Nose	Thick purulent	0	Short time after radical spheno-ethmoidectomy	.....	..	23	..	..	..	..	..	..	..
16	Pus	Ear canal	Moderately thick	0	0	Acute purulent otitis media	6	..	6	..	..	..	..	..	..
17	Pus	Ear canal	Moderately thick	0	0	Acute purulent otitis media	7	..	..	..	..	..	..	..	..
18	Pus	Ear canal	Thin seropurulent	0	0	Acute purulent otitis media	..	6	..	6	..	..	..	..	..
19	Pus	Ear canal	Thin seropurulent	0	0	Acute purulent otitis media	..	10	..	(1 day later) 15	..	..	..	..	..
20	Pus	Ear canal	Thin seropurulent	0	0	Acute purulent otitis media	..	14	..	(1 day later) 14	..	(2 days later) 8.5	..	..	..
21	Pus	Ear canal	Mucopurulent	0	0	Acute purulent otitis media	..	15	..	16	..	..	..	..	..
22	Pus	Ear canal	Thick purulent	0	Simple mastoidectomy; bone necrosis	Acute mastoiditis	37	..	..	..	..	..	..	..	..
23	Pus	Ear canal	Thick purulent	0	Simple mastoidectomy; bone necrosis	Acute mastoiditis	38	..	..	..	..	..	..	..	..
24	Pus	Ear canal	Thick purulent	0	Simple mastoidectomy; bone necrosis	Acute mastoiditis	48	..	..	..	..	..	..	..	..
25	Pus	Aspiration of postauricular swelling	Thick purulent	0	Simple mastoidectomy; bone necrosis	Acute mastoiditis	..	26	..	25	..	..	..	..	..
26	Pus	Ear canal	Thick mucopurulent	Positive	Simple mastoidectomy; bone necrosis	Acute mastoiditis	..	23.6	..	24	..	25.2	..	..	..
27	Pus	Aspiration of postauricular swelling	Thick purulent	0	Simple mastoidectomy; bone necrosis	Acute mastoiditis	..	29	..	..	..	..	..	..	..
28	Pus	Ear canal	Mucopurulent	0	Simple mastoidectomy; bone necrosis	Acute purulent otitis media with mastoid	..	(7 days after otitis) 13	..	(12 days after otitis) 6	..	(19 days after otitis) 21	..	(22 days after otitis) 26.6	..
29	Pus	Ear canal	Thick purulent	0	Pus in mastoid; no bone necrosis	Only 6 days after onset otitis	..	9	..	(1 week postoperative) 30	..	(2 weeks postoperative) 14	..	(2½ weeks postoperative) 12	..
30	Pus	Ear canal	Mucopurulent	0	0	Acute otitis(?)	..	(8 days after otitis) 12.5	..	(10 days after otitis) 23.4	..	(11 days after otitis) 19	..	(12 days after otitis) 16	—13 —9
31	Pus	Lung sinus; chronic osteomyelitis	Thick purulent	Positive	Osteotomy 4 years ago	Chronic osteomyelitis	..	26	..	..	..	..	..	..	..
32	Pus	Aspiration at operation	Thin pus	0	Osteotomy	Acute osteomyelitis	..	21	..	..	..	..	..	..	..

the presence of suppurative bone disease. Whether this will be borne out by more extensive experience remains to be seen. Our present limited experience would seem to indicate that the calcium determination of the pus, possibly together with the quantitative determination of other constituents, may become a valuable aid in diagnosing the existence of a destruction of bone due to the suppuration.

36 East Seventy-Third Street.

EPHEDRINE IN THE TREATMENT OF BRONCHIAL ASTHMA IN CHILDREN

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The early reports on the action and uses of ephedrine [1] indicated that it should be a valuable remedy for the relief of attacks of bronchial asthma in children as well as in adults.

The first work revealed that ephedrine was effective when given orally, and that the relief given often lasted as long as twenty-four hours and seldom less than four hours. As far as could be determined, a tolerance for the drug was not established.

During the last few months we have used ephedrine sulphate in the treatment of twenty-two cases of bronchial asthma in children. Twenty of these were taken from private practice, and two from the outpatient dispensary of the Children's Memorial Hospital. The effects of the drug were observed and reported to us in each instance by the parents. They were requested to keep a record of the dose; whether relief was afforded; if so, how soon after administration; the duration of the period of relief, and finally whether there was any unpleasant effect, such as nausea, giddiness, drowsiness or diuresis.

Ephedrine sulphate was used in each case. The minimum and maximum doses were 12 and 50 mg., respectively. In some instances the drug was given regularly every four hours, in others only as needed and indicated by the symptoms. A detailed report of the data obtained is contained in the accompanying table.

SUMMARY

Twenty-two children with bronchial asthma were treated with ephedrine sulphate administered orally. In twelve instances, relief was afforded patients who were in the paroxysmal stage or had severe persistent cough, usually within from thirty to forty-five minutes after the first dose. Four of the patients were only partially relieved, and in six instances the drug did not have any apparent beneficial effect.

Nine of the patients had persistent cough as a major symptom. This was relieved effectively in eight instances.

Four children were nauseated after taking the drug, and two of these did not experience a beneficial effect.

Ephedrine is commonly used in China as a diaphoretic and is known by the name of "horse sweat." Ephedrine produced this effect in only one of our cases.

The severe itching of the urticaria was relieved in one case.

Effect of Ephedrine in Bronchial Asthma

Case	Age, Years	Dose, Mg.	Observations
1	14	50 every 4 hours	A rather severe chronic case; previously frequent doses of epinephrine had been necessary to secure relief during the acute attacks; following administration of ephedrine, dyspnea was relieved and recurrence was prevented; onset of relief about forty minutes after taking; mild wheezing was never relieved Impression: Partial relief
2	14	50 every 4 hours	A severe chronic case; first few doses caused nausea; never any definitely beneficial effect Impression: Not any effect
3	3	25	Had mild wheeze and cough; relieved cough; made child sleepy
4	10	25 and 50	Not any effect
5	8	50	Gave excellent relief thirty minutes after 50 mg. dose; child was beginning an acute dyspneic attack when drug was administered; not any subsequent attack Impression: Relief
6	10	25, 35 and 50	Not any effect
7	12	50	A rather severe chronic case, with mild wheezing throughout the day, dyspnea occurring about 3 a. m. and persisting for several hours; one dose afforded relief within forty-five minutes and further doses were not needed for about twenty-four hours; the itching of the urticaria was greatly relieved Impression: Relief
8	7	50	Having a moderately severe attack; in previous attacks paroxysmal dyspnea occurred several times each day; one dose relieved dyspnea in about forty-five minutes; effect usually presisted about twelve hours; profuse sweating followed each dose, occurring usually a few minutes before dyspnea was relieved Impression: Relief
9	12	25 every 4 hours	Most bothersome feature was persistent cough; this was effectively relieved Impression: Relief
10	8	50	Had persistent cough; only mild wheezing; cough was relieved; slight nausea following first dose; thereafter not any unpleasant effect Impression: Relief
11	4	25	Not any effect
12	3	12	Caused nausea; not any other effect; tincture of belladonna gave partial relief
13	2½	12	Cough was again the major difficulty, there being only mild wheezing; cough and wheezing were both relieved within forty-five minutes after first dose Impression: Relief
14	8	25 every 4 hours	Not any effect; given every four hours from appearance of first symptom; finally necessary to give epinephrine, which stopped the attack
15	9	40 twice a day	Cough was the major symptom, and was relieved effectively; slight nausea followed the first dose; relief afforded within from thirty to forty-five minutes
16	12	50 every 4 hours	Complete relief from dyspnea and cough within from thirty to forty-five minutes after first dose
17	9	25 every 4 hours	Mild expiratory wheeze with persistent cough; relief within from thirty to forty-five minutes after first dose
18	8	50 3 times daily	Moderate dyspnea, which was relieved thirty minutes after the first dose; slight wheezing persisted
19	2	20 every 4 hours	Second attack of asthma; expiratory wheeze, which was relieved thirty minutes after first dose
20	9	40	Cough was the most bothersome symptom; the child had been able to get very little rest at night; ephedrine was given every four hours the first night, with good relief from cough; one dose was sufficient on two subsequent nights; chest clear one week later
21	2	20	Moderate dyspnea; restless at night; rested much better after two doses; slight dyspnea persisted Impression: Partial relief
22	10	25	Moderate dyspnea at night; two doses sometimes necessary for relief Impression: Relief

From these results, ephedrine would seem to be a valuable remedy in many instances.

It seems to be especially valuable in the milder cases as a method of relieving cough.

545 Lincoln Avenue.

1. Chen, K. K., and Schmidt, C. F.: Action and Use of Ephedrine, J. A. M. A. **87**: 836-842 (Sept. 11) 1926. Thomas, W. S.: Ephedrine in Asthma, Am. J. M. Sc. **171**: 719-727 (May) 1926. McDermott, H. E.: Ephedrine in Bronchial Asthma, Canad. M. A. J. **16**: 422-423 (April) 1926. Miller, T. G.: Ephedrine: Use in Treatment of Hypotension and Bronchial Asthma, Ann. Clin. Med. **4**: 713-721 (March) 1926; Clinical Value of Ephedrine, Am. J. M. Sc. **170**: 157-181 (Aug.) 1925.

Clinical Notes, Suggestions and New Instruments

A CASE OF COINCIDENT DIPHTHERIA AND VINCENT'S ANGINA *

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This case came to the attention of the city laboratory, and is of interest in emphasizing the value of laboratory examinations, as well as in pointing out the fallacy of diagnosing oral membranes from their visible character, or by direct microscopic examination alone from throat swabs.

A married woman, with one young child, was seen by her physician on a Tuesday; the symptoms were obscure. Sunday, a whitish, albuminous membrane was observed. She was examined at this time by four physicians, whose opinions were evenly divided as to whether the membrane was that of diphtheria or of Vincent's angina. A swab was submitted to the city laboratory, where direct microscopic examination revealed myriads of spirochetes and fusiform bacilli. An immediate report of Vincent's angina was made. On the following day, however, the cultures showed a very profuse growth, almost in pure culture, of diphtheria bacilli of the slender, granular type. The culture is now being purified for a virulence test.

This is the first case of coincident infection observed in our laboratory in the last five years, and I believe that the occurrence is so uncommon as to warrant reporting. Ordinarily, a physical diagnosis of Vincent's angina, substantiated by a microscopic examination revealing a characteristic flora of spirochetes and fusiform bacilli, would be regarded as sufficient. It would appear, in this case, that the diphtheritic infection would have been missed, and that further contact cases in the home might have resulted.

Antitoxin was given to the mother and to the husband and child. The case is now subsiding under treatment, and further contact cases have not developed.

HYDROCEPHALUS WITH CESSATION OF PERSISTENT EPILEPTIC CONVULSIONS AFTER PUNCTURE OF THE LATERAL VENTRICLES †

ALFRED GORDON, M.D., PHILADELPHIA

Concerning the pathology of organic epilepsy there is a wide diversity of opinion. However, it is admitted by the majority of observers that the reception of stimuli and the discharge of motor power, viz., muscular spasms in epilepsy, are the province of the motor cells of the cortex. Therein lies the main station to which flow the abnormal nervous currents. As to the original sources of stimulation or irritation, the accumulated anatomoclinical, physiologic and experimental data present a very large field of localizations in the brain between its anterior and posterior poles, and the site of the lesion may not necessarily be in the motor area itself. The case reported here seems to be highly instructive from this particular standpoint, as it indicates the special seat of the lesion and consequently leads to a logical surgical intervention. The case is also important from a therapeutic point of view, as it leads to a line of conduct worth repeating since the results were extremely satisfactory. Although postmortem features are lacking in this case, nevertheless the clinical and postoperative data are so striking that they deserve a place among many analogous records.

REPORT OF CASE

R. E., a boy, now over 4 years old, presented at the age of 2, when I first saw him, a very large head with a protruding forehead. He was totally helpless, and could not stand or walk. When seated, the trunk would fall forward. He salivated considerably and food would run out of his mouth. He had to be fed with small amounts of liquids. The sphincters were uncontrollable. His intelligence was that of a low grade idiot. He could not learn anything or imitate others, in spite of all efforts on the part of his parents. At the age of 1 he commenced to have convulsive attacks, at times unilateral and at times bilateral in distribution. As he advanced in age, the spasms became more and more frequent. He soon developed, in addition to the major attacks, spells of petit mal consisting only of sudden loss of consciousness without muscular contractions. In March, 1926, the convulsive seizures became unusually frequent, about five or eight attacks daily.

Examination at that time showed, in addition to the symptoms described, unequal patellar tendon reflexes, the left increased; the left plantar reflex was in extension; on the right side the knee reflex was much diminished and the test for plantar reflex did not give any response. Ankle clonus was absent on both sides. The superficial sensations to all forms were apparently not involved. The eye examination did not show gross pathologic changes except for the presence of full and tortuous veins in the fundi. Roentgen-ray examination did not reveal any abnormalities, and the sella turcica was normal. Urinalysis was negative. Blood examination showed: hemoglobin, 80; red corpuscles, 3,340,000; white corpuscles, 6,800; polymorphonuclears, 38 per cent; small lymphocytes, 48; large lymphocytes, 5; transitionals, 9. The Wassermann reaction of the blood was negative. The child was pale and undernourished. The frequent convulsive seizures kept him in such a stuporous state that it was difficult to feed him.

The family history was negative with the exception of three uncompleted pregnancies of the patient's mother. The treatment consisted of small doses of phenobarbital (luminal), in addition to the usual precautionary measures concerning the diet and hygiene. As results were not obtained even from large doses of phenobarbital or from bromides, and in spite of a negative Wassermann reaction, antisyphilitic treatment was instituted with apparent beneficial results at first. Soon, however, the attacks returned with the same intensity and frequency. Radical measures were then proposed to the parents, which they promptly accepted. In the presence of the hydrocephalus and in view of the fact that the anterior fontanel was still unclosed in spite of the age (the child was 3 years old), a puncture of the latter was attempted at first. Untoward results did not ensue from this procedure, but it did not have any beneficial effect whatever on the convulsive seizures during the following ten days. It was then decided to puncture the posterior horns of the lateral ventricles. At first the puncture was done on one side: a small trephining was performed at about 2 inches back of and 1 inch above the external auditory meatus; the hollow needle was introduced slowly and horizontally until fluid appeared at the outer end; 4 cc. of fluid was removed. A decided improvement followed almost immediately. On the first two days the patient had only one attack a day; on the following day the attacks became less and less frequent, and finally disappeared. On the fourteenth day the attacks became again more frequent, although not as frequent as before the operation. It was then decided to puncture the lateral ventricle at the same level on the other side. With the same procedure, 4 cc. of cerebrospinal fluid was withdrawn, and at the same time a spinal puncture was performed, by which 15 cc. of spinal fluid was allowed to run out. The child made an uneventful recovery. A cytologic examination at both times showed 12 and 23 cells a field, respectively; organisms were not found.

Since the last operation the improvement was and is being noticeable in every respect. In the nine months that have elapsed there has not been a return of convulsions; the fontanel closed; the child began to notice objects and persons; he can repeat and say voluntarily words and some sentences, and he stands and walks without assistance. The continuous progress with regard to the convulsive seizures and to the mentality is at present uninterrupted. The child's bodily health is markedly good. The blood picture became normal.

COMMENT

The report of this case is warranted at least by reason of the unusual physical and mental improvement following the

* From the West Virginia University School of Medicine.

† Patient exhibited at the meeting of the Philadelphia Neurological Society, Jan. 28, 1927.

removal of a small quantity of fluid directly from the lateral ventricle. The report seems also justifiable on account of the method of approach in the surgical procedure.

The question of the pathogenesis of the epilepsy in this particular case is equally important. It is to be presumed that we were dealing here with an acute ependymitis or an acute inflammation of the choroid plexuses which, after the relief of the intraventricular pressure, gradually subsided. Of course, there may be a recurrence of the inflammatory state and a reaccumulation of fluid with convulsive seizures as a consequence. But nine months of perfect freedom from convulsions against the status epilepticus which existed before the surgical intervention is strongly in favor of the contention that the intraventricular condition was most probably the direct etiologic factor of the convulsive seizures. This case is an additional confirmation of the conclusions I[1] expressed in a previous anatomoclinical contribution presented before the meeting of the American Neurological Association, June 5-7, 1924; namely, that any segment of the brain possesses epileptogenous properties, and that while the mechanism of epileptic convulsions lies fundamentally in the disturbed function of the cortical motor cells, the impulses of the latter are influenced by morbid foci in any region of the intracranial tissue.

1812 Spruce Street.

SAWDUST BEDS FOR THE HELPLESS UNTIDY INSANE

WILLIAM R. THOMPSON, M.D., LEXINGTON, KY.
Assistant Superintendent, Eastern State Hospital

Dr. F. G. LaRue, superintendent for the Eastern State Hospital at Lexington, Ky., noticed in the quarterly report for July of the Department of Public Welfare of Illinois a short description of sawdust beds, in use in a hospital in Bauch, Germany, for the helpless, untidy insane. This class of patients is the most troublesome of all in any hospital, and any provision that adds to their comfort and makes their care easier is worth installing.

He at once had them installed in the Eastern State Hospital for this class of patients, and the results have been so satisfactory after more than a year's trial that I feel that all hospitals should know of them. So far as I know, this is the only hospital in this country using them.

At present, there are thirty-four of these beds in use, and every one in charge, including the attendants, is highly pleased with the results. The beds are oblong boxes, made of 1 inch dressed boards; 6½ feet long, 30 inches wide and 18 inches deep, standing on legs 12 inches high and painted white.

They are filled with fresh sawdust within 6 inches of the top, the sawdust having been first passed through a one-fourth inch sieve. The sawdust should not be too fine on account of packing, and may be renewed as a whole at any time with but little trouble, if necessary. Rollers may be put on these beds as on any other bed. Friends and relatives of patients have never made any complaint about their use.

The patient, clothed in a short night shirt, lies directly on the sawdust, which readily conforms to the shape of the body, but does not in any way interfere with whatever movements of the body or limbs he may be able to make. A pillow is placed under the head and the patient is covered with sheet and blankets, according to the temperature of the room.

The excreta from the bowels and kidneys with the small amount of sawdust thereby soiled is scooped out immediately with an ordinary 6 inch scoop and destroyed. Fresh sawdust is added from time to time to keep the total amount up to the 12 inch level; it is stirred to the bottom several times a week to prevent its packing too hard, and the top is easily kept level by means of a scoop or the hand. The beds are cared for by fairly intelligent patients under the supervision of an attendant.

The patients do not suffer any inconvenience whatever; they are easily changed, bathed and cared for in all necessary things, and appear to be more comfortable than when in the regular bed with its sheet and rubber cloth under them.

The advantages of these beds are as follows: They are sanitary, and neat and clean in appearance; all odor is eliminated; bed sores do not develop and readily heal when patients with them, even far advanced paralytics, are placed in the beds. They can be quickly made by any carpenter, and the original cost and cost of maintenance is small compared with the regulation hospital bed and its equipment. Restraint is not needed to keep the patients from falling out of bed as they often did, with bruises and sometimes broken bones resulting, regardless of care and attention.

The saving in laundry is quite an item in hospitals and a helpless, untidy patient will soil from twelve to eighteen sheets every twenty-four hours. By the use of these beds, the number of sheets is reduced to not more than three a day, and seldom this many. Night shirts are seldom soiled, and the patient is never wet from the discharges from the body, as the sawdust absorbs all moisture at once. It is surprising what a small amount is dampened by a free evacuation of the bladder.

The members of the medical profession who have seen these beds in use praise them highly and wonder why they have not been thought of before.

1. Gordon, Alfred. J. Nerv. & Ment. Dis. **61**: 142 (Feb.) 1925.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

ABBOTT'S MINERAL OIL EMULSION.—A mixture composed of liquid petrolatum, 40 cc.; agar, tragacanth and gelatin, 2 Gm.; sugar and flavoring, 2 Gm., and water sufficient to make 100 cc.

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Prepared by the Abbott Laboratories, North Chicago, Ill. No U. S. patent or trademark.

EPHEDRINE HYDROCHLORIDE (See THE JOURNAL, March 19, 1927, p. 925).

Ephedrine Hydrochloride-Swan-Myers.—A brand of ephedrine hydrochloride-N. N. R.

Manufactured by Swan-Myers Company, Indianapolis. No U. S. patent or trademark.

Capsules Ephedrine Hydrochloride-Swan-Myers, 0.0324 Gm. (½ grain).

Ephedrine Hydrochloride-Abbott (See THE JOURNAL, March 19, 1927, p. 925. The product is now manufactured by the Abbott Laboratories, North Chicago, Ill.). The following dosage forms have been accepted:

Tablet Triturates Ephedrine Hydrochloride-Abbott, ½ grain.
Capsules Ephedrine Hydrochloride-Abbott, ¼ grain.
Ephedrine Hydrochloride Solution-Abbott, 3%: It is preserved with chlorbutanol, 0.5 per cent.

Study to Obtain Knowledge.—One of the best pieces of advice that can be given a student, especially in the early years of the curriculum, is not to work at any branch of study as though his only object were to pass the examination. He should work to obtain knowledge for its own sake. The student of good intelligence who makes it his aim to grasp the principles of each of the basic sciences need have little dread of examiners. In mastering the principles he will find that the larger details take on new meanings and a new interest and are thereby fixed in his memory.—*Brit. M. J.* **2**:412 (Sept. 4) 1926.

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SATURDAY, APRIL 16, 1927

THE WASHINGTON SESSION

The glory of Washington, the nation's capital, gives to the annual session of the American Medical Association for 1927 an unusual dignity. The consent of the President of the United States to address the opening meeting of the session confers an official distinction, a recognition, indeed, of the high place held by the physicians of this country in the minds and hearts of our people. By years of unremitting effort in behalf of the public and by consistent adherence to the high ideals that have animated scientific medicine, the organized medical profession stands today at the peak of public recognition of its accomplishments. The Washington session will be memorable not only because it will be held in the midst of the beauties of the capital city, but also because the arrangements provide unusual ceremonies possible nowhere else. The scientific programs, the exhibits and the entertainments reflect the opportunities in scientific medicine of the government medical services. The eyes and the thoughts of the people, turned always toward the seat of our government, will during that week receive reflections of what the physicians of the nation are striving to accomplish for their good. May the profession send forth to them a promise for the future of continued altruistic service.

THE IRON CONTENT OF MILK

From a quantitative standpoint the amount of iron—less than 3 Gm.—in the body almost places that element in the category of the "little things" which have pronounced physiologic significance. The part that it plays as a component of hemoglobin, the respiratory pigment of the blood, has long been well recognized. Discussions of hematologic changes, such as the anemias represent, commonly involve questions of the supply and assimilation of iron. The school child is taught that iron helps "to build rich, red blood," and the more expert student presently is made to realize that some compounds of iron may furnish the element in a more readily available form than do others. The debates regarding the efficiency of organic versus inorganic iron have not yet died out. Of late, the iron problem in nutrition has been enlarged through the realization that the element is a component of the chromatin substances which appear to control (in some degree, at least) the most important and "vital" activities within the cells. Recent work indicates also that small amounts of iron in other forms may play an important part in catalyzing the oxidation-reduction reactions through which the potential energy of the oxidizable foodstuffs is made kinetic for the support of the work of the active tissues of the body.[1] Such suggestions, furthermore, have made the rôle of iron in the active cells a subject of subtle exploitation by the quack.[2]

Textbooks of biochemistry have long stressed the fact that milk, the most nearly perfect single food, is comparatively poor in iron. Experiments are usually cited to show that the ash of milk and the ash of the new-born animal, of the same species, are very similar in all constituents except iron, which is almost six times as abundant in the ash of the young animal as it is in the ash of the milk on which it is nourished. Nature has compensated for this difference by supplying the animal at birth with a reserve store of iron, but often this supply is depleted before food richer in iron supplements the milk.

What this discussion involves may perhaps be better appreciated when it is realized that the concentration of iron in milk approximates only 0.0002 per cent. Certain adult species, such as rabbits, can readily be made anemic by being restricted to a diet of cow's milk.[3] The small possibility of gaining iron rapidly on an exclusive ration of this iron content is obvious. Consequently, the suggestion of securing an increment in the iron content of cow's milk by suitable feeding of lactating cattle has been discussed. It is known that certain dietary components may be transferred to the milk. Drugs occasionally pass into human milk from the food, and the content of milk in some of the vitamins is said to vary with the vitamin supply in these food factors. At the Wisconsin Experiment Station, Elvehjem, Herrin and Hart[4] have made crucial experiments in respect to iron. They found that the iron content of goat's milk cannot be increased by feeding the goats iron oxide or the very soluble iron salt ferrous sulphate. A noticeable change in iron content cannot be detected even if the addition of the iron increases the original iron content of the ration

1. A summary of the present status of the subject is given by Sherman, H. C.: Chemistry of Food and Nutrition, New York, the Macmillan Company, 1926.

2. Cramp, A. J.: I-on-a-co—The Magic Horse Collar (Hygeia **5**: 69 [Feb.] 1927; J. A. M. A. **88**: 262 [Jan. 22] 1927) gives an illustrative instance.

3. Hart, E. B.; Steenbock, H.; Elvehjem, C. A., and Waddell, J.: Iron in Nutrition: I. Nutritional Anemia on Whole Milk Diets and the Utilization of Inorganic Iron in Hemoglobin Building, J. Biol. Chem. **65**: 67 (Aug.) 1925.

4. Elvehjem, C. A.; Herrin, R. C., and Hart, E. B.: Iron in Nutrition: III. The Effects of Diet on the Iron Content of Milk, J. Biol. Chem. **71**: 255 (Jan.) 1927.

fivefold. Feeding fresh green cabbage together with the iron oxide also had a negative effect on increasing the amount of iron in the milk. The addition of iron oxide or iron oxide plus fresh green cabbage to the ration of a goat did not bring about changes in the milk that would prevent the development of nutritional anemia when fed to young growing rabbits. A difference was not noted in the average iron content of milk from cows on such different rations as alfalfa hay and timothy hay. The alfalfa hay contained twice as much iron as the timothy hay. The percentage of iron in the milk from individual cows varied as much as 100 per cent. This variation cannot be correlated with the length of the lactation period. Evidently milk cannot be converted by diet into a conspicuous source of iron.

URINE CARBOHYDRATES

In a recent issue of THE JOURNAL,[1] the increasing evidences that so-called normal urine does not contain glucose, the sugar of the circulating blood, were commented on. It may be argued that the discussion of this much debated topic ought now to be brought promptly to a conclusion. The problem of the urinary occurrence of any proximate principle, whether it be protein, fat or carbohydrate, is assuredly of such significance that it deserves respectful consideration at all times. The fact that products having at least the semblance of carbohydrate nature can be detected in practically every urine affords an ever recurring occasion for attempting to elucidate their presence. Furthermore, the explanation of their occurrence should throw more light on the question of the actual extent to which the kidneys are normally impermeable to blood sugar.

Through research done in the medical clinic of the Johns Hopkins University, Eagle[2] has advanced our knowledge of the subject by the renewed demonstration that glucose is not normally excreted in the urine. His technic permitted the detection of this sugar in concentrations as low as 0.01 per cent. Eagle asserts that what has heretofore been considered to be glucose, fermentable by yeast, is in reality a group of substances that only gradually decompose under the conditions of fermentation, possibly because of bacterial decomposition. Such decomposition is a matter of days, while the fermentation of glucose is completed in less than an hour.

Until a certain critical level of blood sugar has been reached, the kidney interposes an absolute barrier against the excretion of glucose. The ingestion of moderate quantities of glucose by the normal individual fails to exceed this threshold value, and is accordingly not followed by the appearance of even traces of glucose in the urine. It is only when such large quantities as 100 Gm. of glucose are taken that this critical level of blood sugar is exceeded in a certain proportion of normal individuals, and then only does fermentable sugar appear in the urine. Once begun, however, the excretion of glucose continues even after the blood sugar has receded to below this level.

Eagle has concluded from his studies that the increase in urine sugar following food or even glucose intake, discovered by Benedict and termed by him glycuresis, represents, not glucose, but nonfermentable substances. In the case of food it is probably true, as has been suggested, that these are either foreign nonassimilable carbohydrates originally present in the food, or decomposition products formed in the process of preparing food or of its digestion. The increase in their excretion following the ingestion of glucose is somewhat difficult to understand, and may be due to any of several factors suggested: variations in the rate of secretion, a trace of impurities in the glucose used, or a mobilization of these substances in the blood coincident with the rise in blood sugar. At any rate there is no "leakage" of blood sugar through the renal barrier in the normal individual on the average diet.

1. Does Normal Urine Contain Glucose? editorial, J. A. M. A. **87**: 2166 (Dec. 25) 1926.
2. Eagle, H. S.: On the Nature of the Urine Sugars, J. Biol. Chem. **71**: 481 (Jan.) 1927.

GUANIDINE BASES AND ESSENTIAL HYPERTENSION

The recent history of medical theories contains many instances of attempts to ascribe one or another abnormality of function to the genesis or retention of potent toxic substances in the body. Indeed, the hypotheses involving intoxication and detoxication in relation to disturbances in physiologic behavior have vied of late with the theories of deficiency as devices for the explanation of various obscure bodily upsets. Thus, it may be recalled that the thyroid has been looked on in the past as an organ that "neutralizes" or destroys harmful products arising in the organism. On this basis, loss of thyroid function would lead to harm through the circulation of uncontrolled toxic products. Today, the theory of thyroid function assumes the production of an effective hormone by the gland. Hypofunction of the thyroid, on this basis, results in detriment through lack of an essential chemical regulative substance generated in the gland rather than through accumulation of an unimpaired poison. Similarly, certain types of tetany have been attributed by some to the circulation of a toxic catabolite; by others to a failure in the mobilization of calcium in the blood.

There have been varied attempts to discover some chemical factor responsible for hypertension. This is a natural tendency in view of the fact that increased arterial pressure can readily be produced by a variety of drugs. What could be more logical than to seek a circulating abnormally present hypotensive substance on which to fasten the charge of responsibility for high blood pressure? Major and Stephenson[1] observed in

1. Major, R. H., and Stephenson, W.: Bull. Johns Hopkins Hosp. **35**: 140 (May) 1924; **35**: 186 (June) 1924.

experimental animals that the guanidine compounds may cause a rise in blood pressure, and they suggested that this may be of some significance in the production of hypertension. Guanidine derivatives have at various times been described as normal constituents of blood and urine, though such statements have lately been vigorously opposed by capable biochemists.

In this country Major [2] has championed the idea that essential hypertension may be due to deficient guanidine excretion. His assumption was based on an alleged decrease in the daily excretion of a guanidine derivative supposed to be a constantly eliminated catabolite. Recent studies of White [3] at the University of Manitoba in Winnipeg support earlier investigations of Greenwald demonstrating the inadequacy of the chemical technic heretofore employed in attempting to identify the guanidine compounds in the excreta. He asserts that there is as yet no valid indication of the presence in normal urine of any guanidine bases. It follows, therefore, that satisfactory chemical evidence does not exist connecting essential hypertension with retention of guanidine bases. With this pronouncement the supporting prop is, temporarily at least, withdrawn from an alluring hypothesis. We must look anew for an explanation of essential hypertension.

Current Comment

THE DIRECT STUDY OF TISSUE METABOLISM

The study of the respiratory metabolism of the organism as expressed by the production of carbon dioxide and the absorption of oxygen is no longer confined to special laboratories but has become a routine in some phases of the clinical examination of patients. In fact, the process of ascertaining the metabolic performance in the body has been so highly developed that the worker in this field is already confronted with the necessity of choosing between a considerable variety of available apparatus for the determinations.[4] The feature that is measured is the response of the body as a whole. Measurements of the respiratory exchange on a very small scale have repeatedly been attempted in recent years. The technic has been developed to such perfection that the performance of small quantities of isolated tissues can be followed with considerable success. The German biochemist Otto Warburg, in particular, has made notable contributions to the technic involved. Applications by Richardson, Loebel and Shorr [5] at the Russell Sage Institute of Pathology, New York, have indicated that particles of tissue, though deprived of nerve connections and circulation, utilize the same proportion of foodstuffs as the intact organism. Evidence of the conversion of one food material into another was lacking. The calculated respiratory quotients were all between 0.7 and 1.0, and are fully accounted for by the oxidation of foodstuffs. When active surviving tissues were immersed in suitable solutions containing dextrose, the respiratory quotient was raised in such a way as to indicate that the result may be attributed to the direct utilization of the sugar. Now that certain aspects of the study of metabolism can be so successfully prosecuted on individual tissues, considerable progress may confidently be expected in the way of understanding the metabolic response of cell masses under varying conditions of normality or abnormality. A new method may usually be expected to afford a new outlook.

2. Major, R. H.: Relationships Between Certain Products of Metabolism and Arterial Hypertension, J. A. M. A. **83**: 81 (July 12) 1924; Bull. Johns Hopkins Hosp. **36**: 357 (May) 1925.

3. White, F. D.: A Note on the Nature of the Picrate Obtained from Normal Urine by the Method of Findlay and Sharpe, J. Biol. Chem. **71**: 419 (Jan.) 1927.

4. Du Bois, E. T.: Basal Metabolism in Health and Disease, ed. 2, Philadelphia, Lea & Febiger, 1927.

5. Richardson, H. B.; Loebel, R. O., and Shorr, E.: The Metabolism and the Respiratory Quotient of Excised Renal Tissue, Proc. Soc. Exper. Biol. & Med. **24**: 243 (Dec.) 1926.

NONDIABETIC LOWERED CARBOHYDRATE TOLERANCE

When sugar enters the systemic blood, either by postprandial absorption or by direct injection, in more than certain defined amounts within a short period, hyperglycemia almost invariably ensues. Ordinarily the rise in the sugar content of the circulating fluid is not very pronounced; the increase represents the temporary excess beyond what the organism is capable of disposing of instantly either through immediate utilization or storage as glycogen. Thus the familiar transitory postprandial hyperglycemia indicates that the sugar-retaining powers of the liver and muscles are not sufficiently effective to prevent the temporary accumulation of some of the absorbed sugar in the systemic blood. There are instances, however, in which such hyperglycemias persist far beyond the average period. The usual effect of 100 Gm. of dextrose administered by mouth, for example, is an increase in blood sugar amounting to one third of the normal and lasting for from one to four hours. Prolonged hyperglycemias of this magnitude continued over longer periods under similar conditions in intake point, as a rule, to some abnormality of metabolism. Perversions of the phenomenon are familiar in certain types of thyroid disturbance, for instance. Failure of the removal of carbohydrate with the usual speed from the blood does not necessarily mean that there is a deficiency in the production of insulin—the hormone promoting sugar utilization—as might be assumed. It has been observed [1] that dextrose injected into the blood stream of infants with diarrhea, infection or acute intestinal intoxication may not be removed with the normal rapidity. Tisdall, Drake and Brown [2] of the Hospital for Sick Children, in Toronto, have thrown some light on the defect involved in such cases. They noted in young animals that the subcutaneous administration of certain bacterial and chemical toxins definitely impairs the ability of the animal to remove injected dextrose from the blood stream at the normal rate. Rapidly induced dehydration, as well as certain

1. Tisdall, F. F.; Drake, T. G. H., and Brown, Alan: Carbohydrate Metabolism of Infants with Diarrhea, Am. J. Dis. Child. **30**: 837 (Dec.) 1925.

2. Tisdall, F. F.; Drake, T. G. H., and Brown, Alan: The Production of a Lowered Carbohydrate Tolerance in Dogs, Am. J. Dis. Child. **32**: 854 (Dec.) 1926.

drugs, accomplish the same sort of retardation. Mere elevation of body temperature is not responsible for this; in fact, the utilization of sugar may actually be accelerated in fever. The Toronto pediatricians believe that the impairment in the ability of the animal to remove injected dextrose from the blood stream at the normal rate is not an effect of the substance given or of the dehydration produced, but is associated with a more profound functional derangement of the cells, commonly called intoxication. To what extent the changed sugar tolerance means increased glycogenolysis, resulting in surplus of circulating sugar, or decreased glyconeogenesis remains to be ascertained. At any rate, impaired ability of the organism to store administered carbohydrates needs to be reckoned with.

Association News

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 14, 15 and 16, 1927

(Continued from page 1185)

FEDERATION OF STATE MEDICAL BOARDS

FEBRUARY 16—AFTERNOON

Administering the Law Against Illegal Practitioners

DR. HAROLD RYPINS, Albany, N. Y.: The prosecution of illegal practitioners of medicine is properly considered as one subdivision of the activities of a state bureau having control over the education, licensure and practice of physicians. Punishment for illegal practice is only part of a program for the elimination of unqualified practitioners, and that, in turn, is only the complement of state licensure. The essential object of a medical practice act is to provide properly trained physicians for the care of the public, and any consideration of the enforcement of laws against illegal practitioners is futile unless from the outset it is realized that such prosecutions are part of a larger, unified program.

In other words, all the functions of the state in reference to the educational qualifications, licensure and professional conduct of physicians (and possibly of the other professions) should be combined in one state bureau, which should also direct the prosecution of the illegal practitioner.

The essential materials for a proper enforcement of a law against unlicensed practitioners are precisely the same as those required for running a newspaper, a college, a banking business or an engineering project; namely, men and money. In other words, important as the proper legal statutes are, they are not so important from a practical point of view as a competent person to administer the statute, provided with adequate sinews of war.

New York has always maintained that a proper annual registration law for practicing physicians in the sine qua non for enforcing a medical practice act. This annual registration of practicing physicians is a drag-net which is continuously bringing to light and eliminating illegal practitioners. It is also the only method for securing the necessary funds, free from political interference, for the maintenance of a permanent administrative bureau of medicine. The annual registration fee in New York State is $2, so that from that source alone there is an annual income of about $32,000. It is expected that this will be increased from the fines and penalties collected under the act, and the fees from the regular medical licensing examinations. This fund will supply two deputy attorney-generals and five full-time medical inspectors, and the necessary clerical help, together with traveling expenses, office expenditures and the cost of securing evidence and prosecuting. The ultimate efficiency of enforcement will depend not so much on the conviction of a large number of illegal practitioners as on the demonstration that the state's machinery for prosecuting these practitioners is not to be tampered with lightly.

When the annual list of registered physicians is mailed to the profession it will contain a request for all practitioners receiving the list to report confidentially to the department the name of any one known to the practitioner as practicing medicine whose name does not appear on the registered list. In this way we shall have a steady flow of reports on unlicensed physicians coming in for investigation from all parts of the state. The interest of the public in learning whether or not physicians are registered is somewhat surprising. Equally surprising is the fact that most unlicensed physicians are reported not by one individual but usually by three or more interested citizens, so that before an investigation has begun we have some idea of the alleged illegal practitioner's activities.

The specific evidence of illegal practice to be used in legal prosecutions is obtained by our inspectors.

All prosecutions are in the hands of two deputy attorney-generals. The advantage of prosecutions by the attorney-general's office is obvious. The district attorney's offices are naturally subject to a great deal of local pressure, and in the past it has been found practically impossible to secure action through them. The attorney-general's office is free from such local interference, and the appointment of deputy attorney-generals whose primary business it is to prosecute these cases means that they are not pigeonholed by the competition of other types of prosecutions. The legal end of these prosecutions requires great patience and tenacity of purpose as well as a practical knowledge of court procedure, and cannot be satisfactorily handled by a lawyer who is not constantly doing this work.

Three features should govern the selection of cases for prosecution. First, no case should be prosecuted until the attorney-general is satisfied that the evidence makes the case a more than reasonably sure one. Secondly, where possible, the individual prosecuted should not be an insignificant one but a well known conspicuous figure, so that the publicity attended on his trial will increase the general sense that the state means business and is not to be tampered with lightly. Lastly, great discretion should be used both in the selection of cases and in the spirit in which they are prosecuted to avoid the creation of persecuted martyrs and heroes out of law breakers. No attempts should be made to prosecute most illegal practitioners. The conviction of a few of the outstanding ones will do the work. On the other hand, the creation of a state-wide, all-embracing prosecution soon takes on the aspect of a moral crusade, and the injection of a spirit of venom and persecution may easily swing the public and juries to the side of the under dog. By the same token it is obvious that these prosecutions should be carried out by the state authorities only, without any assistance from organized medical societies, to avoid the complaint that the medical men are persecuting their competitors. All the prosecutions must be conducted by the state authorities for the benefit of the public health only and in a spirit of fair play, and humor behind a serious impersonal purpose must be obvious.

The public generally is interested in the question of quacks and the illegal practice and its interest is reflected in the legislature. It is essential to keep the press well informed of the progress of the prosecution of illegal practitioners. Such publicity not only brings in reports of other violators but increases the public's sense of the importance of doing away with quacks and charlatans. (This paper will be published in full in the *Federation Bulletin*.)

(To be continued)

Education a Community Affair.—There has been and still persists the conception that education is a classroom affair; that only what can be taken care of at the school building is to be done; that educational specialists are not to lead or direct or be otherwise concerned with experience which must be had in other places within the community. The present topic more than any other discussed in this volume reveals the limitations of such primitive educational thought and practice.—Bobbitt: The Curriculum, p. 180.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

State Medical Meeting.—The Arkansas Medical Society will hold its annual meeting at Little Rock, May 11-14, under the presidency of Dr. James M. Lemons, Pine Bluff; all sessions will be at the Capital Hotel. The house of delegates will meet on the opening day, and the president's annual message will be delivered that afternoon. There will be a public session in the evening addressed by Dr. Charles M. Rosser, Dallas, Texas. The second evening will be devoted to entertainment and the second morning to unveiling a monument. There will be clinics at various hospitals. Dr. William Engelbach, St. Louis, will speak on "Diagnosis and Treatment of Defective Children" with lantern slide demonstration, and Dr. Seale Harris, Birmingham, Ala., on "High Fat, Low Carbohydrate Diet in Gastric and Duodenal Ulcer." There will be addresses also by prominent physicians of Arkansas.

CALIFORNIA

Bill Introduced.—Senate bill 873 would regulate the practices of hairdressers and cosmeticians.

Hospital News.—The cornerstone of the new 300 bed St. Joseph's Hospital, San Francisco, was laid, February 6. The structure will be of the most approved earthquake and fireproof construction, and will be finished by November. ——It was expected that work would be started in March on the $8,000,000 Los Angeles General Hospital which will adjoin the present general hospital.

Lectureship on Diseases of Pacific Basin.—Dr. Tadasu Saiki, director of the Imperial Government Institute for Nutrition, Tokyo, Japan, will lecture, April 22-23, 8 p. m., Lane Hall, Stanford University Medical School, San Francisco, on "Modern Currents in the Studies of Nutrition" and "Practical Application of Studies in Nutrition," illustrated by moving pictures. The lectures are given under the Morris Herzstein Lectureship on Diseases of the Pacific Basin Including Tropical Diseases.

Health Officers Appointed.—Dr. Gordon M. Grundy became the city health officer of Newport Beach about the first of the year; Dr. Herman J. Wickman is city health officer of Perris, succeeding Dr. Daniel W. Sheldon. Dr. Charles H. Barnes, Smith River, has been appointed health officer of Del Norte County, succeeding Dr. Earl W. Hill. Dr. Walter E. Coppedge succeeded Dr. John Stile as health officer of the city of Alturas, February 10. Dr. John H. Leimbach has been appointed health officer of the newly incorporated city of Isleton. Mr. George R. Sidwell succeeded Dr. Herbert R. King as city health officer of Winters, January 1.

Dr. Brodrick Appointed Professor of Hospital Administration.—The dean of Stanford University School of Medicine, San Francisco, announces the appointment of Dr. Richard G. Brodrick, president, American Hospital Association, as professor of hospital administration and physician superintendent of the Stanford hospitals. Dr. Brodrick graduated from Cooper Medical College and was for several years in the Medical Corps of the U. S. Navy; from 1908 to 1919, he was connected with the San Francisco Board of Health and from 1914-1919 was superintendent of the San Francisco Hospital. For the last eight years he has been director of the hospitals of Alameda County, and consultant to the Highland Hospital, Oakland.

CONNECTICUT

Liquor License Revoked.—The district prohibition administrator, with headquarters in New York, recently revoked the liquor license of the following for the reasons indicated:

Dr. Antonio Albert LaPlume, Bristol, Conn., arrested and pleaded guilty to issuing false prescriptions.

New Health Officers.—Since January 1, Dr. James E. Davis has been appointed health officer of West Hartford. Dr. Harvey B. Goddard succeeds Dr. Winthrop D. Scudder as temporary health officer of East Hartford and South Windsor; Dr. Erel L. Guidone has been appointed health officer of Hampton, succeeding Dr. Arthur D. Marsh.

DISTRICT OF COLUMBIA

Hospital House Officers' Dinner.—Former house officers of Garfield Memorial Hospital, Washington, D. C., are forming an alumni association, and will hold their first annual dinner during the session of the American Medical Association at the Hotel Hamilton, May 16. Former house officers are cordially invited; reservations should be made through Dr. E. Clarence Rice, 1801 I Street, N.W., Washington, D. C.

GEORGIA

Personal.—Dr. Henry G. Mealing, an instructor in laboratory diagnosis, Johns Hopkins University Medical Department, Baltimore, has accepted a position with the University of Georgia Medical Department for the year 1927-1928; Dr. Mealing formerly lived in Augusta.——Dr. Thomas B. Gay, Jr., Athens, has resigned as pediatrician for the child health demonstration of that city and Dr. Edward D. Andrews, Columbia, S. C., has been appointed to succeed him.——Dr. Shelley C. Davis sailed, March 20, for Paris, France, to serve a year in the American Hospital. Dr. Davis has completed an internship at Lakeside Hospital, Cleveland, Ohio.

Society News.—Dr. Elmore C. Thrash, Atlanta, addressed the Twelfth District Medical Society, recently, at Eastman, on "Recent Methods of Diagnosis and Therapy"; Dr. Thomas C. Thompson, Vidalia, on "Sacral and Spinal Anesthesia"; Dr. Robert L. Cater, Jr., Macon, "Disease of the Respiratory Tract"; Dr. Allen H. Bunce, Atlanta, "The Dilution and Concentration Test of Kidney Function," and Dr. Otis B. Moye, Soperton, "Scale of Vitality." Dr. Virgil O. Harvard, the president, presided.——Dr. Ralston Lattimore, Savannah, read a paper on "Rest and Exercise in Heart Disease" before the Chatham County Medical Society, February 8.——Dr. Jay F. Schamberg, Philadelphia, addressed a special meeting of the county medical society, February 1, at Richmond, on "Malaria in the Treatment of Neurosyphilis" and "Colloidal Lead in the Treatment of Cancer." ——The governor-elect of Georgia, Dr. Lamartine G. Hardman, Commerce, addressed the annual meeting of the Spalding County Medical Society, recently, at Griffin.—— Members of the Burke County Medical Society entertained their wives and sweethearts at a luncheon, February 9, at the Anthony Wayne Hotel, Waynesboro; the ladies arranged the program; the subjects were "The Doctor as a Husband" by Mrs. William R. Lowe, Midville, and "The Doctor's Wife" by Mrs. William C. McCarver, Vidette.——Dr. Stewart R. Roberts addressed the Fulton County Medical Society, Atlanta, April 7, on "Medical Experiences Abroad," and Dr. James R. McCord gave a clinical talk on "Treatment of Puerperal Sepsis."

IDAHO

Personal.—Drs. Charles F. Hanmer, Salmon; Delos E. Cornwall, St. Maries; Fern M. Cole, Caldwell; Frank Willis Almond, Boise; Abram M. Newton, Pocatello, and Clifford M. Cline, Idaho Falls, were appointed on the board of state medical examiners, March 19, to serve throughout the year. The Idaho plan is to appoint a new board of examiners for each examination, which usually takes place twice a year. The department of law enforcement created by the legislature in 1919 succeeded to the rights, powers and duties of all boards of registration and licensure in Idaho.——Dr. Frank W. Mitchell, Blackfoot, was reappointed superintendent of the Idaho Asylum for the Insane by the newly appointed board, March 14.

ILLINOIS

Liquor Licenses Revoked.—The district prohibition administrator, with headquarters in Chicago, recently revoked the liquor licenses of the following for the reasons indicated:

Dr. Donald C. Good, Danville, issued two prescriptions for same persons within ten days.

Dr. Victor A. Bergeron, Bourbonnais, sale of prescriptions without medical examination.

Chiropractors Must Complete Sentences.—Chiropractors A. A. Hawkinson, Warsaw, and H. E. Puckett, LaHarpe, have been notified by the state's attorney that they must at once proceed to complete their sentence at the state farm at Vandalia for practicing without licenses. Sentenced last summer, they appealed to the supreme court which upheld the verdict.

Chicago

Society News.—Dr. Henry C. Sweaney addressed the Chicago Pathological Society, April 11, on "Variations of the Tubercle Parasite"; Dr. Emanuel B. Fink on "Malignant

Tumors of the Pituitary Gland," and Dr. Harry Jackson, on "The Pathogenesis of Agranulocytosis."

Liquor Licenses Revoked.—The local prohibition administrator recently revoked the liquor licenses of the following for the reasons indicated:

Dr. Carroll O. Getty, inaccurate records; illegal issuance of prescriptions; diversion; conspiracy.
Dr. Homer K. Nicoll, inaccurate records; illegal issuance of prescriptions; diversion.
Dr. Albert Schneyff, inaccurate records; illegal issuance of prescriptions.
Dr. Anthony Walter Woolley, illegal issuance of prescriptions.

University Merges Tuition Fees.—The trustees of the University of Chicago have merged the laboratory and tuition fees with the general tuition fee, establishing a net fee of $100 a quarter for undergraduates, to take effect with the summer quarter of 1927. Students will receive health, dispensary and infirmary service in the new hospital, the cost of which is included in the foregoing figure.

INDIANA

Society News.—Dr. Joseph L. Miller, chemical professor of medicine, Rush Medical College, Chicago, addressed the Indianapolis Medical Society, March 8, on "Periodic Physical Examination."

Personal.—Dr. Abner H. Shaffer, Huntington, former member of the state legislature, celebrated his ninety-eighth birthday, January 15.——Dr. Calvin A. Seymoure, Albion, celebrated his eightieth birthday in March.——Dr. Albert H. Harold, Indianapolis, has been appointed medical director for the French Lick Springs Hotel, French Lick, to succeed the late Dr. Dunning S. Wilson.

Hospital News.—The Indiana Christian Hospital Association plans to erect an emergency hospital of about 250 beds and a nurses' home in the downtown district of Indianapolis. Campaign headquarters have been established at 44 South Pennsylvania Street, and Dr. Orville S. Jaquith has been appointed state campaign chairman by the Disciples of Christ Church. The hospital association was formed two years ago to take over the old Deaconess Hospital, which has been operating at full capacity.

"Dr." John F. Wright Arrested.—"Dr." John F. Wright, who is known also as James E. Wright, was arrested, March 24, at Huntington, and placed in jail on a warrant charging him with practicing medicine without a license. The Huntington *Press* reports that Wright claims to be 95 years of age and looks to be 55. How he came into possession of the license of a Dr. John F. Wright, who has been dead for years and who, if alive, would now be about 95 years old, is said to be under investigation. Wright's case will not come up until the next term of court. According to the Indiana State Board of Registration in Medicine, the license of John F. Wright, M.D., (this license was issued to James E. Wright, who had obtained it under fraud and misrepresentation) was revoked, Jan. 12, 1926. James E. Wright was not a medical graduate.

LOUISIANA

Dr. Stirling Honored.—The East Baton Rouge Parish Medical Society gave a dinner, March 9, in honor of Dr. Louis Grey Stirling, and presented him with a loving cup. Dr. Stirling, who is the oldest physician in Baton Rouge in years of service, has spent his entire professional life there; he has served as president of the East Baton Rouge Parish Medical Society; vice president of the Louisiana State Medical Society; member of the city council; head physician of the state prison since 1900, and is the permanent chief of staff of Our Lady of the Lake Sanatorium.

Conference for Social Betterment.—A state conference for social betterment was held at New Orleans, March 15-19. There was an institute of five sessions organized by a special committee for registrants interested in case work, and a series of joint conferences with various allied agencies and groups. A general session was presided over by Dr. Charles C. Bass, dean, Tulane University of Louisiana School of Medicine, and addressed by Dr. John H. Musser, Jr., on "Periodic Health Examination" and Dr. Urban Maes on "Control of Cancer." A luncheon meeting at the Touro Infirmary was presided over by Dr. John D. Spelman, president of the conference. A joint session with the Louisiana Interracial Committee was addressed by Mary L. Railey, secretary, Child Welfare Association, on "Health Needs Among the Negroes." Other physicians in charge of the program included Dr. G. M. Graham Stafford, of the executive committee, and Dr. Jacob W. Newman, chairman, committee on ways and means.

Society News.—Dr. Isaac I. Lemann addressed the Orleans Parish Medical Society, New Orleans, March 28, on "Diagnosis of Coronary Occlusions"; Dr. Isidore Cohn on "Septicemia," and Dr. Charles E. Verdier on "Neisserian Urethritis and Prostatitis."——The state convention of coroners will meet at Hammond, April 23.——Dr. Mendel Silber addressed the Orleans Parish Medical Society, March 14, on "Medicine in the Talmud," and Dr. Daniel N. Silverman on "The Newer Conception of Achylia Gastrica."——Dr. Thomas H. Watkins, Lake Charles, was elected president of the Seventh District Medical Society at the meeting at Jennings.——Dr. James S. Plant, Newark, N. J. addressed a joint meeting of the Orleans Parish Tuberculosis and Public Health Association and the New Orleans Health Council, March 9, on "The Child's Needs."——The Orleans Parish Medical Society is investigating the advisability of having motion pictures and phonographic records made of some of its distinguished members; samples have been made but have not yet been demonstrated before the society.

MAINE

Bill Introduced.—House bill 965 regulates the manufacture, sale and distribution of cosmetics.

MICHIGAN

Bill Introduced.—Senate bill 330 would provide for the hospitalization of tuberculous patients.

University News.—Hugo R. Kruyt, professor of chemistry, University of Utrecht, will conduct a course at the University of Michigan this summer.

Hospital News.—The new city hospital at Big Rapids is to be opened, May 1, with fifteen private rooms and two wards, in addition to the maternity ward. The entire equipment and the site were donated. The funds for construction were obtained by popular subscription. The architecture is such that additions can be added as needed.

Society News.—Dr. Harry C. Saltzstein gave a report before the Wayne County Medical Society, Detroit, April 5, on "Cancer Week"; the subject at the April 19 meeting will be "How Biologic Products Are Made," and will be presented by Parke, Davis and Company.——Dr. Norman E. Clarke addressed the West Side Physicians' Association, Detroit, April 7, on "The Heart."——Dr. Harold I. Lillie, Mayo Clinic, Rochester, Minn., will address the Detroit Oto-Laryngological Society at the next meeting, April 26-27.——Dr. Arnold L. Jacoby addressed the Highland Park Physicians' Club, Highland Park General Hospital, April 7, on "The Next Step in Preventive Medicine."——The Tri-City Medical Society (Saginaw, Flint and Bay City) will hold a banquet at Bay City, April 27, following which Dr. Chevalier Jackson, Philadelphia, will speak on "Bronchoscopic and Esophagoscopic Cases of General Medical and Surgical Interest."——Dr. Melvin D. Roberts addressed the Houghton County Medical Society, Calumet, February 1, on "Aviation Medicine."——Dr. Walter E. King, Detroit, addressed the Gratiot-Isabella-Clare County Medical Society, February 16, on "Newer Developments in Biologic Therapy."——Dr. John B. Jackson, president of the state medical society, addressed the Berrien County Medical Society at its February meeting on "Diagnosis of Gallbladder Disease," and Dr. Charles E. Boys, Kalamazoo, on "Treatment of Burns" illustrated with moving pictures"; Dr. H. F. Ringo, Montreal, Wis., addressed the Gogebic County Society, March 11, on "Periodic Health Examinations."——Dr. Arthur G. Holbrook was elected president of the Branch County Medical Society for 1927; the retiring president, Dr. Robert L. Wade, tendered the society a dinner, February 8.

MINNESOTA

Bill Introduced.—House bill 86 would define and regulate the practice of naturopathy.

Anti-Evolution Bill Killed.—The house voted, March 10, for an indefinite postponement of the bill which had been introduced to bar the teaching of evolution from the tax supported schools of the state.

County Society News.—Among others, Dr. James Frank Corbett addressed the Minneapolis Surgical Society, April 7, on "Stones in the Bile Ducts," with a report of a strange case.——Dr. Bret V. Bates, Browns Valley, gave a talk on "Fee Bills" before the West Central Minnesota Medical Society, Wheaton, February 19. Dr. Alfred L. Lindberg, Wheaton, discussed "Cholecystitis," and Dr. Claude M.

Pierson, Wheaton, "Pneumonia in Children." The next meeting will be at Starbuck, April 30.—The Stearns-Benton Medical Society met at the U. S. Veterans' Hospital, St. Cloud, February 23, and following a dinner, Dr. William B. Richards discussed the "Present Status of Scarlet Fever"; Dr. George D. Rice, "General Paralysis" and Dr. Claude B. Lewis, St. Cloud, "Postoperative Insanity."

MISSOURI

Case of Leprosy.—A case of leprosy was discovered in St. Louis, April 2, in a woman sent to the city hospital under the supposition that she had a noninfectious skin disease.

Bill Introduced.—House bill 46 would regulate the occupation and practice of hair dressers and cosmeticians, and would create a state board of examiners for the licensing of such practices.

Smallpox Outbreak.—The Franklin County Medical Society is cooperating with the state board of health and the local health authorities at Washington to clear up an outbreak of smallpox, which, up to March 26, had amounted to 197 cases, it is reported. The epidemic, which is believed to have originated in a railroad camp, was subsiding at the time of this report.

Arbor Day at Veterans' Hospital.—There was a large assembly at the U. S. Veterans' Hospital, Jefferson Barracks, April 3, to observe Arbor Day and the planting of thirty-three elms; the ceremony was participated in by the American Legion, Spanish American War Veterans and the Municipal Council of Veterans. The Sixth Regiment, U. S. Army's band, furnished music.

Mental Hygiene Conference.—Under the auspices of the Missouri Mental Hygiene Society, a mental hygiene conference was held at the headquarters of the St. Louis Medical Society, St. Louis, April 4-5, with Dr. Charles P. Emerson, president, National Association of Mental Hygiene, as the principal speaker. This was the first state-wide conference of its kind to be held in Missouri. The program was arranged to interest laymen.

New Radiologic Institute.—There is to be erected a four story radiologic institute on the campus of Washington University School of Medicine, St. Louis, which will serve the affiliated hospitals of the school and be connected with them by corridors. It will provide facilities for research in the field of radiology, and will contain roentgen-ray and radium laboratories and treatment rooms. The institutions served by the institute will be Barnes Hospital, St. Louis Children's Hospital, St. Louis Maternity Hospital, Washington University Dispensary, and when completed, the MacMillan Eye, Ear, Nose and Throat Hospital. The general education board of the Rockefeller Foundation, New York, and the family of Edward Mallinckrodt, St. Louis, have jointly contributed $1,000,000 for the institute.

Personal.—Dr. Williams McKim Marriott, dean and professor of pediatrics of Washington University School of Medicine, St. Louis, was elected temporary president of the newly organized Missouri Society for Crippled Children, pending the election of officers to be held in April.——Dr. Ernest von Quast celebrated his fiftieth year in the practice of medicine, March 2; forty-three years have been spent in Kansas City.——Dr. George C. Mosher, Kansas City, gave a series of talks sponsored by the American Association of Obstetricians, February 9, before the upper classes of the College of Medicine of Ohio State University on "Medical Biography"; February 8, to the students at the University of Cincinnati College of Medicine, on "Obstetricians of the Nineteenth Century," and February 7, before the upper classes of the University of Louisville Obstetrical Society and the Jefferson County Medical Society.——Dr. M. F. Arbuckle, St. Louis, addressed the eye, ear, nose and throat section of the Tennessee State Medical Association at Chattanooga, April 14, on "Otolaryngologic Aspects of Diseases of Children," and Dr. John R. Caulk, St. Louis, addressed this meeting on "Progress in the Surgery of Prostatic Obstruction."

MONTANA

Typhoid in Tourists.—Typhoid in Montana recently has occurred largely in tourists, and others who, in traveling, drink from streams. The state health department notes the example of a family traveling through Montana who drank from the Deer Lodge River; all of them developed typhoid after reaching their destination in California. The death rate in Montana from typhoid has decreased from 39.9 per hundred thousand of population in 1910 to 2.5 in 1926. The reduction has been largely due to supervision of public water supplies. The health department urges that tourists, fishermen and picnickers provide themselves with a supply of safe drinking water, which can be obtained in practically all towns.

NEBRASKA

Hospital News.—The Lutheran Hospital Association has leased the old Presbyterian Hospital on South Tenth Street, Omaha, for hospital purposes; Dr. Fritz Rosenblatt will be chief of the medical staff and Dr. William H. Betz, chief surgeon.

Society News.—Dr. Clayton F. Andrews, Lincoln, addressed the Madison County Medical Society, February 22, on "Disturbances of the Thyroid."——Dr. Frank M. Conlin, Omaha, addressed the Otoe County Medical Society, February 16, on "Complications of Diabetes"; Dr. Roy W. Fouts, Omaha, on "Uses of Dye in Roentgenology of the Gallbladder" and Dr. Clyde A. Roeder on "Clinical Classification of Goiters."——A banquet was tendered by the Adams County Medical Society, recently, in honor of Dr. James V. Beghtol, to celebrate his fiftieth anniversary in the practice of medicine; Dr. Beghtol was the first president of the state board of health.

NEW YORK

Mental Hygiene Course for Travelers.—The Travelers' Aid Society of New York is sponsoring a course of lectures on mental hygiene, arranged in cooperation with a committee of the State Charities Aid Association, with the object of informing its workers about the problems involved and how to recognize mental disorders. The Travelers Aid Society is aiding travelers at the rate of nearly 100,000 a year, many of whom need help because of mental problems or disorders.

Hospital Proposed for Middle Class.—Plans have been announced for a campaign to raise $500,000 to build a hospital at Warwick to provide accommodations for those who are unable to pay for private treatment and are unwilling to accept charity. The hospital is to be on a 300 acre tract, and is to have rooms costing from $17.50 to $25 a week. Among others on the board of governors, as announced, are Drs. Augustus S. Knight, medical director, Metropolitan Life Insurance Company; Harlow Brooks, New York; Walter C. Klotz, director, Cornell Clinic; Jacob A. Patton, medical director, Prudential Life Insurance Company; Morris Renfrew Bradner, Frederick T. Van Beuren, Jr., and Cassius H. Watson, medical director, American Telephone and Telegraph Company. The president is John T. Pratt, who is also president of the Warwick Valley Clinic, and the vice president, Dr. Cassius H. Watson.

New York City

University News.—A course in the pathology and diagnosis of tumors will be given at the Institute of Cancer Research in connection with the summer session of Columbia University, beginning July 11, under the direction of Dr. William H. Woglom; the fee for the course will be $36.

The Herter Lectures.—Dr. Simon Flexner will deliver the Herter Lectures of the University and Bellevue Hospital Medical College, April 18, 20 and 22, at the Carnegie Laboratory, 338 East Twenty-Sixth Street, 4 p. m., on "Experimental Epidemiology"; "Epidemic Influenza," and "Epidemic Encephalitis and Simple Herpes."

Chiropractors Arrested.—Four chiropractors were arrested, March 31, on charges of practicing medicine without a license. Those arrested were Herbert Stein, Joseph R. O'Donnell, Walter L. Vaughan and Jacob Cappel. Vaughan is said to be head of the Chiropractors' Association in the city. Thirty-four chiropractors have been prosecuted since the present campaign began to round up the violators of the Webb-Loomis Act.

Liquor Licenses Revoked.—The district prohibition administrator revoked the liquor licenses of the following during the period, March 14-April 2, for the reasons indicated:

Dr. Maurice T. Hansell, irregular prescriptions.
Dr. Benjamin E. Helprin, irregular prescriptions.
Dr. Anna Kopp, irregular prescriptions.
Dr. Harry R. Litchfield, unlawful sale.
Dr. Max Mandelbaum, irregular prescriptions.
Dr. John W. Poole, irregular prescriptions.
Dr. Giles S. Terry, not actively engaged in the practice of medicine.

Dr. Frauenthal's Will.—The will of the late Dr. Henry W. Frauenthal, founder of the Hospital for Joint Diseases, filed, March 14, bequeathes the bulk of his tangible property to the hospital. The residuary estate is to be divided into four parts and held in trust for his brothers and sisters, and on their successive deaths is to be turned over to the hospital for the laboratory endowment fund. The tangible property is valued at more than $300,000. Dr. Frauenthal's medical library and his equipment were willed to the hospital.

Mount Sinai to Provide for Patients of Moderate Means.—At the annual meeting of Mount Sinai Hospital, Fifth Avenue and One Hundredth Street, March 27, the trustees decided to make provision for private patients with moderate incomes who cannot afford the present price of private rooms, and who do not desire to be placed in the wards. The original private pavilion of the hospital will be rebuilt, it was said, to accommodate semiprivate patients. During the last year, Mount Sinai Hospital treated 13,169 patients, and provided consultations for 194,203 in the outpatient department. The total expense of administering the hospital last year was $1,536,565. During the year, legacies and bequests totaling $133,834 were received. There were donations for special purposes of $280,000, and endowments of wards and perpetual beds of $110,000, in addition to various other gifts received.

NORTH CAROLINA

Measles at High Point.—The city physician of High Point reported, March 29, that 250 cases had been placarded in that city since the epidemic of measles began about five weeks ago, and that there were no signs at that time of abatement.

Society News.—Dr. H. S. Noble, St. Marys, Ohio, addressed the Haywood County Medical Society, Canton, on "Cancer and Some of Its Problems." Dr. Joseph Howell Way, president, state board of health, and Dr. Arthur T. Pritchard, Asheville, councilor of the tenth district, were among those present.——The Fifth District Medical Society met at Sanford, March 18, and were guests of the Lee County Medical Society at a luncheon. Among the speakers were Drs. James D. Highsmith, William S. Jordan, William C. Verdery and John F. Foster.——Dr. P. S. Carley of the Rockefeller Foundation addressed the annual meeting of the Second District Medical Society, Greenville, March 10, on "Recent Advances in Malaria." Other speakers were Drs. Ralph L. Daniels, Newbern; Malcom Thompson, Greenville; David T. Tayloe, Jr., Washington, and Ira M. Hardy, Kinston. Dr. William E. Warren, Williamston, was elected president of the society for 1927.

Hospital News.—Dr. John P. Monroe has been elected president of the New Charlotte Sanatorium, Charlotte, for 1927, and Dr. Silas Raymond Thompson, chairman of the staff.——The Highland Hospital, Asheville, announces the opening of a new building adding about forty beds to the capacity of the building.——Dr. David T. Tayloe, chief surgeon, Washington Hospital, Washington, N. C., celebrated his sixty-third birthday at a dinner at his home, February 23; the dinner was attended by about sixty physicians from various parts of the state.——Citizens of Marion recently held a mass meeting and designated committees to secure the establishment of a county general hospital.——A recent legislative act increased the bonds available for the development of a county tuberculosis hospital in Wake County from $100,000 to $250,000.——The Good Hope Hospital, Erwin, was damaged by fire, March 1, to the extent of about $3,000. The patients were safely removed.——The staff of Bulluck Hospital, Wilmington, gave a dinner in honor of Dr. Walter E. Storm to celebrate the completion of his fiftieth year in the practice of medicine.

OHIO

Hospital News.—The per diem cost for each patient for 1926 at the Mary Rutan Hospital, Bellefontaine, was $6.41.——The Memorial Hospital, Piqua, has completed a new addition of twenty-one rooms.——The contract for a new $200,000 Souder Memorial Hospital, Troy, has been awarded.——The city hospital, Marion, was self-sustaining during 1926; 875 patients received treatment.——The city hospital of Warren has purchased a 99 acre farm for $12,000.——The location of the new state hospital for feebleminded in the northeastern section of Ohio has been changed to Apple Creek from New London. A 2,000 acre tract has been purchased and the survey completed. The price was approximately $225,000; contracts for building to the extent of $780,000 are to be let by July 1.

Society News.—Dr. John H. J. Upham, professor of clinical medicine, Ohio State University College of Medicine, Columbus, and a trustee of the American Medical Association, addressed the Richland County Medical Society, March 17, on "Heart Disease," and Dr. Herman H. Hoppe, head of the department and professor of neurology and psychiatry, University of Cincinnati College of Medicine, on "Neurasthenia."——The Four County Medical Society (Fulton, Henry, Defiance, Williams) invited the members of the Toledo Academy of Medicine to a meeting on medical jurisprudence in Wauseon, April 14; Mr. Leroy E. Eastman and Mr. Frank S. Ham were the speakers.——The Union District Medical Association will hold its one hundred and nineteenth semiannual meeting at Hamilton, April 28, under the presidency of Dr. Gustav A. Hermann; Dr. Louis H. Schriver, Cincinnati, will speak on "Early Diagnosis and Treatment of Hyperthyroidism"; Dr. Harry R. Huston, Dayton, "Indications for Blood Transfusion"; Dr. Merle Flenner, Hamilton, "Quin-Ether-Oil Anesthesia in Obstetrics," and Dr. Clement C. Fihe, Cincinnati, "Radiography of the Chest with Intratrachial Injections."

State Medical Meeting.—The annual meeting of the Ohio State Medical Association will be at the Neil House, Columbus, May 10-12, under the presidency of Dr. Leora G. Bowers, and with the Columbus Academy of Medicine acting as hosts. The association was formed at a meeting in the Neil House eighty-one years ago. For the first time, the general sessions, scientific meetings and exhibits will be held under one roof. More than seventy speakers will take part. Dr. Jabez N. Jackson, Kansas City, President Elect of the American Medical Association, will give the annual oration on surgery, Wednesday, 3 p. m.; Dr. Jay F. Schamberg, Philadelphia, will speak on "Modern Conceptions of the Treatment of Syphilis"; Dr. Morris Fishbein, Chicago, "Socialization and Fraternalism in Medical Practice," and L. R. Kahn, Sc.D., Lansing, Mich., on "Rôle of the Kahn Test in Clinical Medicine." The organization luncheon for officers and committeemen of county societies and academies and for state officers will be Wednesday noon; Dr. Jacob E. Tuckerman, Cleveland, will discuss "Medical Defense Problems." Preceding the meeting there will be clinics at Columbus hospitals Monday, and detailed programs will be announced on bulletin boards of hotels. The golf tournament will be played at the Sciota Country Club, May 9. Prizes will be given. A special feature of this meeting will be the twenty-one piece "doctor's orchestra" from Akron.

PENNSYLVANIA

Bill Introduced.—Senate bill 1327 is a joint resolution which would create a commission to study the laws relating to the healing arts.

Chiropractic Bill Killed.—The Grimes bill providing for a board of chiropractic examiners was killed by the senate committee, March 30, which voted to postpone it indefinitely. The committee's chief objection to the bill, it is reported, concerned a provision which would permit chiropractors practicing at present to be licensed without examination.

Philadelphia

University News.—The Philadelphia College of Pharmacy and Science is constructing a new building at Forty-Third Street and Woodlawn Avenue.

Hospital News.—The campaign to raise $600,000 for the Germantown Hospital closed, April 5, with a grand total of more than $825,000 for improvements and maintenance.

Personal.—Dr. Jane Sands of the Woman's Medical College of Pennsylvania was awarded the Sarah Berliner Research and Lecture Scholarship, March 6, at the biennial meeting of the American Association of University Women in Washington.

Growth of Social Service.—A tablet was unveiled, March 25, in the new dispensary of the Presbyterian Hospital, Saunders and Powelton avenues, commemorating the founding of the social service department in 1881. Mrs. Frank C. Roberts, president, Ladies' Aid Society, presented the tablet, which was accepted by the president of the hospital, Henry N. Paul. Dr. James E. Talley, among others, gave an address. The social service department originated as a comfort for patients department, and now is carried on by a staff of nine workers and a director.

Society News.—The New York and Philadelphia Obstetrical societies held a joint meeting in Philadelphia, April 12, which comprised clinics at various hospitals, a dinner at

the Ritz-Carlton Hotel, reports by New York fellows on clinics attended, and a paper by Dr. Robert T. Frank, New York, on "Endocrine Therapy."——Sir Esme Howard, British ambassador to the United States, addressed the College of Physicians of Philadelphia, March 6, at ceremonies commemorating the one hundredth anniversary of the birth of Lord Lister.——Laymen and physicians held a meeting, April 7, to organize a Pennsylvania branch of the American Association for Medical Progress.

RHODE ISLAND

Society News.—Dr. John H. Morrissey, Jr., New York, addressed the Providence Medical Society, March 14, on "The Renal Factor of Gastro-Intestinal Symptomatology."

TENNESSEE

Bills Introduced.—House bill 726 would provide for the establishment of narcotic wards in hospitals for the insane. House bill 769 provides for the regulation of the practice of surgery in certain narrowly defined localities.

Knoxville Instead of Nashville.—The medical library of the late Dr. George M. Burdett was presented by his widow to the Knoxville Health Center for the use of physicians of that city and vicinity instead of to Nashville, as was noted in THE JOURNAL, April 2. This is the initial contribution to a medical library which is to be established in Knoxville, and since the gift was announced, Dr. Claudius M. Capps, formerly of Knoxville but now with the Veterans' Bureau Hospital at Aspinwall, Pa., has donated his medical library to the Knoxville Health Center.

TEXAS

Smallpox at Wichita Falls.—There had been sixty-two cases of smallpox this year at Wichita Falls up to March 22, or more than four times the number of cases for the entire year of 1926. The Wichita Falls *Times* reported that members of quarantined families were breaking quarantine, thus exposing others to the disease.

Society News.—The Southwest Texas District Medical Association met at Lufkin, April 7-8, under the presidency of Dr. William Lapat; the speakers were physicians from Houston, Lufkin, Beaumont and Galveston.——Major Harry G. Wyer, U. S. Army, addressed the El Paso County Medical Society, February 14, on "Peptic Ulcer."

New State Board of Health.—Governor Moody has announced the appointment of the following physicians as members of the state board of health; John C. Thomas, Austin; A. A. Ross, Lockhart; William A. King, San Antonio; Elbert W. Wright, Bowie; Charles M. Rosser, Dallas; Jacob M. Frazier, Belton. Dr. James C. Anderson, Plainview, who was formerly appointed, is president of the board.

WASHINGTON

King County's Annual Dinner.—Two hundred and twenty-three physicians attended the annual dinner of the King County Medical Society, Seattle, March 5; Dr. E. Weldon Young was toastmaster; the speakers were Drs. Mary H. F. Perkins, Tacoma; Christen Quevli, Tacoma; Walter C. Woodward and Rev. H. H. Gowen, whose subject was "Medicine in Literature." The "medical and surgical orchestra" performed under the direction of Dr. Carl M. Burdick; others on the musical program were Dr. Louis H. Maxson, Robert L. Glase, Alexander B. Hepler, C. A. Smith and Franklin S. Palmer. Among the guests were Dr. Harry G. Willard, president, Washington State Medical Association, and Dr. Edgar F. Dodds, president, Pierce County Medical Society.

Society News.—Dr. Albert B. Murphy addressed the Snohomish County Medical Society, Everett, March 1, on "The Larynx in Relation to Thyroid Surgery."——Dr. Archibald W. Howe, Tacoma, addressed the Lewis County Medical Society, Centralia, March 14, on "Acute Suppurative Otitis Media," and Dr. Joseph F. Griggs, Tacoma, "Focal Infections as a Cause of Cardiovascular Renal Disease."——Dr. Albert C. Stewart addressed the Pierce County Medical Society, Tacoma, March 22, on "Organic Disease as a Cause of Mental Disturbance," and Dr. Edward A. Rich on "Examination of a Back for Common Pathologic Conditions."——Dr. Walter J. Taylor, state senator, addressed the Clallam County Medical Society, Port Angeles, March 14, on "Medical Legislation: Particularly in Reference to the New Basic Science Bill."——A special meeting of the King County Medical Society was held, March 31; the guest of honor was Dr. J. J. R. MacLeod, University of Toronto Faculty of Medicine, whose subject was "Some Recent Researches on the Ductless Glands"; Dr. Frederick D. Stricker, Portland, Ore., addressed the April 4 meeting on "Periodic Examinations of Apparently Well Persons" and Dr. Donald V. Trueblood, on "The Life of Lister."

GENERAL

The Bacteriophage—A Live Subject.—Less than ten years ago d'Herelle published his first paper on the bacteriophage. According to a review in the *World's Health*, d'Herelle's latest publication (1926) contains a bibliography on the subject of 647 references, most of which has been contributed in the last five years.

Joint Meeting on Physical Therapy.—The American Electrotherapeutic Association and the American College of Physical Therapy will hold a joint meeting, May 16-17, at the Carlton Hotel, Washington, D. C., to which fellows of the American Medical Association are invited. There will be demonstrations at the physiotherapy clinic of the Walter Reed General Hospital.

Lectures at American Hospital of Paris.—American physicians and students going to Paris have the opportunity to register for a series of twelve lessons at the American Hospital of Paris, 63 Boulevard Victor Hugo, Neuilly-Sur-Seine. They will be given in English without charge, May 16-31. These lectures are provided to facilitate studies for American physicians who wish to follow French courses. Those wishing to attend should send their names at once.

More Counties Free of Bovine Tuberculosis.—Following official tests, the U. S. Department of Agriculture announces that nineteen more counties in eleven states show less than 0.5 per cent of infected cattle, and therefore have been declared as modified accredited areas for a period of three years. Two other counties have been retested and reaccredited for their continuance as tuberculosis free areas. The total number of such counties in the United States declared free of bovine tuberculosis is now 285.

Painter of "The Doctor" Is Dead.—Sir Luke Fildes, painter of the picture "The Doctor," is dead in London at the age of 84. His masterpiece hangs in the National Gallery. The doctor sits watching his little patient, the mother sits with her head bowed on her arms and the father stands with his hand on her shoulder. The Chicago *Evening Post* sees in the symbol the struggle between science and death. It is, perhaps, more a symbol of the personal relation between doctor and patient. The picture was painted thirty-four years ago.

Society News.—The American Association for the Study of Allergy will hold its fifth annual meeting, Washington Hotel, Washington, D. C., under the presidency of Dr. Karl K. Koessler, Chicago, May 16-17; Dr. Arthur F. Coca is to speak on "Pathology of Atopic Hypersensitiveness" at a dinner to which all physicians are invited; reservations ($4) may be made with the secretary, Dr. Albert H. Rowe, Oakland, Calif. Specialists from all parts of the United States will take part in the symposium on allergy at the various sessions, Monday and Tuesday.

Warning — Unauthorized Agent — Whittaker. — Numerous complaints are being received concerning the activities of Lee F. Whittaker, who poses as an agent for THE JOURNAL. Whittaker is not connected with THE JOURNAL in any way, and has no authority to collect any funds. His latest field of action has been in the state of Oklahoma; formerly he operated in Kansas and in Virginia, and on each of these occasions, a warning was published in the news. Duly authorized agents of THE JOURNAL have credentials signed by Dr. Olin West, secretary and general manager, and agents who do not have such credentials are unauthorized to collect funds for THE JOURNAL.

National Hospital Day.—May 12, the birthday of Florence Nightingale, will be National Hospital Day, as it has been for six years. It is a day when hospital doors are opened to the public, and an occasion for public investigation of the facilities, the activities, the aims, ideals, problems and needs of the hospital. May 12, last year, more than 2,000,000 persons availed themselves of this opportunity to visit hospitals. The occasion is observed now throughout the United States and is officially recognized in Canada, Australia, New Zealand, the Philippines, Alaska, Hawaii, Egypt and other countries. A beautiful design has been made into a button

by the American Hospital Association for the occasion, and is for sale by that organization at a nominal price.

Hospital Clinical Congress of North America.—Under the auspices of the College of Hospital Administration of Marquette University, a hospital clinical congress of North America will be held in Milwaukee, June 20-24, in coincidence with the twelfth annual convention of the Catholic Hospital Association of the United States and Canada. This is announced as the first attempt to institute a practical hospital clinic and exposition of international proportions demonstrating all departments of hospital work. The exhibits will start with the office and receiving room of the hospital, and will extend through every department, radiology, general surgeries, minor surgeries, pediatrics, obstetrics, physical therapy, electrocardiagraph, basal metabolism, and the general pathologic laboratory. There will be installed model kitchens, dietary clinics, laundry and mechanical equipment and accessories, and in a separate hall there will be a nurses' school and intern service, an outpatient and social service bureau and a photography department. There will be four departments in the groupings: hospital; public health; safety and industrial relief, and research. Persons interested or engaged in any way in modern hospital work are cordially invited. The night meetings will be of interest to the general public, and will constitute a broad educational feature. The arrangements of clinics will be under the direction of Dr. Malcolm T. MacEachern, Chicago, director of hospital activities, American College of Surgeons.

FOREIGN

International Society of Urologists.—The Third Congress of the International Society of Urologists will take place at Brussels, August 3-6, under the presidency of Professor Verhoogen. The questions proposed for discussion are (1) comparative value of various methods of examination of the blood and urine in urologic surgery; (2) physical methods of treatment of tumors of the bladder; (3) treatment of tuberculosis of the genital organs. For further information address G. Pasteau, general secretary, 13, Avenue de Villars, Paris.

Centenary of Vulpian.—The Society of Biology in Paris and its affiliated societies, together with the Eighth International Congress of Neurologists, are planning to celebrate the hundredth anniversary of Vulpian's birth, May 27 to June 2, simultaneously with their regular session. It will coincide with the commemoration of the hundredth anniversary of Pinel's death, which is being organized by the Medico-psychologic Society. Mail should be addressed to Dr. Crouzon, general secretary of the organization committee, Hospice de la Salpêtrière, 47, Boulevard de l'Hôpital, Paris.

International Congress for Child Protection.—An International Congress for Child Protection is being organized by the League of Red Cross Societies, the International Association for the Promotion of Child Welfare, the International Union for the Protection of Infants, and the Save the Children Fund International Union, to be held in Paris, July 2-5, 1928, in connection with the International Congress for Relief and the International Conference of Social Service. Experts in various countries, who will be requested to submit reports, should send them before Oct. 1, 1927, to the office of the congress, 37 Avenue Victor-Emmanuel III, Paris. Members of the congress may speak in any language; speeches in French will be rendered in English; reports and minutes will be published in English and French. The subscription ($5) includes all meetings, receptions and visits, and a copy of the minutes. Associate members, wives and relatives of members will pay half this fee. An international exhibition will be open, July 1-15.

CORRECTIONS

Hospitals Approved by Nurse Examining Boards.—The Hospital Number of THE JOURNAL, March 12, p. 799, reported the Beard Memorial Hospital of Troy, Ala., as not recognized by the Alabama Nurses' Board of Examination and Registration. The statement was based on the report of the board, which now desires to report that the Beard Memorial Hospital is accredited.——The New Jersey State Board of Examiners of Nurses writes that its reporting of the Homeopathic Hospital of Essex County as unapproved was an unavoidable error, because of the similarity in name to a hospital that was unapproved. The board states that approval recently has been extended to the Essex County Hospital, Cedargrove, and the Holy Name Hospital, Teaneck.

Foreign Letters

LONDON

(From Our Regular Correspondent)

March 28, 1927.

Mental Disorder in Relation to Eugenics

At the annual dinner of the Eugenics Education Society, commemorating the birthday of Sir Francis Galton, the Galton lecture was delivered by Dr. A. F. Tredgold. He said that the majority of cases of mental disease were the result of inheritance. Environmental factors played a great part, but the main cause was constitution. The inheritance was not of the disease itself, but of the neuropathic diathesis, which diathesis was due to an impairment, or devitalization, of the germ cell. This impairment varied in degree in different cells, and as it was influenced by the condition of the second or combining cell, as well as by the environment, the results on the offspring differed greatly. There was no inheritance of mental defect or insanity as such, or of any quality as it existed in the individual. What was inherited was a tendency for development to proceed in certain particular directions and up to a certain limit. The result of such inheritance was, in some cases, mental deficiency; in others various forms of insanity or dementia; and, in yet others, the individual might go through life apparently normal, though still a "carrier" of the impairment, which might reveal itself in mental disease in a subsequent generation. The attempts made to show that mental disease or defect was transmitted in accordance with mendelian laws had failed. What seemed to be clear was that if with the impaired cell there was combined a cell similarly impaired then the developmental potentiality of the embryo was still further reduced, but that if the combining cell was healthy such reduction would be less marked, and the individual might show a normal mentality, though always liable to mental breakdown when exposed to physical or mental stresses, or even to changes incident to any of the physiologic periods of life, such as the climacteric. In many cases such a breakdown was the beginning of a steadily progressive dementia. On the other hand, given the healthy combining cell with favorable surroundings, particularly in early life, the impairment might be neutralized and even bred out. Mental disease in the community was kept alive by "carriers," that is to say persons who might themselves appear to be normal, as the disordered tendency was slight, and they had not been exposed to conditions which would precipitate a breakdown. But the tendency was there, and under certain conditions their offspring was there, and under certain conditions their offspring might again have the taint. Dr. Tredgold did not find evidence of a close association between genius and insanity. No doubt some men of genius had been of poor physical constitution and prone to ill health, and others had been eccentric and possessed delicately balanced brains. But there was no close correlation between the two things, and the great majority of men of genius were remarkably sane. The statistics furnished the royal commission of 1904 showed that in every thousand of the population there were four mental defectives and nearly as many insane. This corresponded at the present time to a total of 174,000 defectives and 134,000 lunatics, and no doubt these figures underestimated the real incidence. In addition to these, an even larger number of persons, while not certifiable, suffered from such disabling conditions as neurasthenia, hysteria, epilepsy and borderland states. If the mating of neuropaths could be rigidly restricted to those similarly affected, the disease would work out its own elimination in eventual sterility. The one

thing urgently needed was the prevention of propagation of persons who suffered from diseases due to inheritance. The advantages of segregation outweighed those of sterilization, but even were it possible to prevent, by one or other of these methods, propagation by any person now suffering from insanity or mental defect, there would still be a long way to go before mental disease could be eradicated. The mating of carriers with the healthy was the greatest danger to the race. There was only one way to stem degeneracy and assist racial progress—by an intensive educational campaign for the development throughout the nation of the eugenic ideal—an ideal which should not merely be given intellectual adherence, but should have the quality of a sentiment and emotion, like the religious and esthetic sentiments which had achieved so much. "It is extraordinary," concluded Dr. Tredgold, "that a people which prides itself on its sound common sense should be content to spend millions on the cure, care and maintenance of persons suffering from disease, and take practically no steps to prevent it at its source."

Vital Statistics: The Falling Birth Rate

In England and Wales during the last three months of 1926 there were, compared with the preceding three months, 27,959 more deaths (1,700 more from influenza) and 10,413 fewer births. The birth rate was the lowest ever recorded for the final quarter of any year except that of the war year 1917, and for the whole year the lowest there has been except for the war year 1918. Nevertheless, the population increased during 1926 by 241,102. There were 17.8 children born to every thousand of the population. For the whole of 1926 the death rate, 11.6 per thousand, equaled that of 1923, the lowest yet returned. Throughout the twelve months, 453,795 persons died and 694,897 were born. Infant mortality figures continue their steady downward trend. Only seventy-six babies under 1 year of age died per thousand, this being 8 per thousand below the rate for the last three months of 1925, and also 8 per thousand below the average of the ten preceding fourth quarters. During the year, 558,642 persons were married, a percentage of 14.3 of the estimated population at the middle of the year.

Postgraduate Tour for Surgeons in the United States and Canada

A postgraduate tour in the United States and in Canada is being organized by the surgical section of the Royal Society of Medicine. It is proposed that the complete tour shall take about six weeks. Among the places visited will be Boston, New Haven, New York, Philadelphia, Baltimore, Washington, Cleveland, Detroit, Ann Arbor, Grand Rapids, Chicago, Rochester (Mayo Clinic), Great Lakes, Niagara, Toronto, Ottawa and Montreal. Facilities will be offered to members who wish to shorten the tour, which is primarily organized for surgeons, but arrangements will also be made for those interested in other branches of medicine. By arrangement with the Cunard Company the cost of the whole tour, including ocean passage, rail and other transport and hotel expenses, will be approximately $600. Traveling facilities on the same terms will be offered to wives of those taking part in the tour. Membership of the tour is open to all members of the section of surgery and to all fellows of the Royal Society of Medicine on nomination by the organizing committee. Nonfellows who wish to join must be nominated by two members of the section and be approved by the committee. The tour has been arranged to give surgeons in this country an opportunity of seeing the work of some of the important surgical clinics in the United States and Canada at a reasonable cost, and with the expenditure of the minimum of time and personal trouble. Should the numbers exceed 100, a special train for the party will be provided and the Cunard Company will send a traveling courier.

PARIS

(From Our Regular Correspondent)

March 16, 1927.

The Incongruities of Health Statistics

Dr. Dequidt, formerly head of the Service central du contrôle in the ministry of public health but who is now the manager of an independent special journal, the *Mouvement sanitaire*, writes that health statistics as at present published are not fully reliable. While the law of 1902 demands that the exact causes of deaths be registered, the number of deaths from "unknown causes" immediately increased. From 1911 to 1921, between 5 and 6 per cent of the deaths were declared to be due to unknown causes. In 1925, the percentage increased to 26.7. However, in about fifteen departments of France the percentage is above 50, and in the department of la Corrèze it is nearly 70. Such figures render the statistics of these departments practically useless. In a department adjacent to Paris, the mortality from pulmonary tuberculosis has fallen in five years from fifteen to ten per 10,000 inhabitants, which amounts to a decrease of 33 per cent from the general average for France. But, at the same time, the number of deaths, in that same department, from unknown causes has increased from 5 per cent to 40 per cent. The question is, How many deaths from tuberculosis may be included in that figure? One of the most important services that the Office national d'hygiène sociale, recently created, will render will be the establishment of uniform statistics in the departments of France. At the present time, statistics may be made to say anything that one wants them to say.

The Horse in Relation to Human Diphtheria

M. Panisset, professor at the Ecole de médecine vétérinaire d'Alfort, has delivered a number of lectures at the Faculté de médecine de Paris. One lecture dealt with the rôle of the horse as a normal host of the human diphtheria bacillus, a question which came up for discussion many years ago but which has never been completely solved. In the army, epidemics of diphtheria always begin in, and often are confined to, the cavalry. If the horse is not a propagating agent for the diphtheria bacillus, he is at least a natural reservoir. Rather frequently horses are found that have been immunized naturally and whose serum is antidiphtheritic without any previous inoculation of the animal. The diphtheria bacillus has often been found in the nasal mucus of the horse. Wounds and the pus of abscesses in horses often contain diphtheria bacilli. Possibly the gradual replacement of the horse by the automobile may contribute to the extinction of diphtheria.

Progress in the Equipment of Day Nurseries

At the Hôpital St. Louis, M. Jules Renault has installed a new ventilation system. All the patients lie in beds isolated in individual cubicles. M. Armand-Delille, at the Salpêtrière, has introduced the same isolation system in the day nursery reserved for the children of the hospital personnel. The children when they are fed are far removed from the other children. Aside from a few sporadic cases of measles, diphtheria and pertussis, there has not been an outbreak of infectious disease. During fair and warm weather, all the children were subjected to daily sun baths applied to the whole body. Not a single child showed signs of rickets, although the average incidence of rickets among French children is 7 per cent.

The International Bureau of Epizootics

In 1924, the International Bureau of Epizootics, for the study and prophylaxis of contagious diseases of animals, was established in Paris. The bureau was placed in charge of a committee composed of representatives of the nations supporting the project. The first meeting of the committee has

just been held at the offices of the ministry of agriculture. Twenty-four countries were represented. M. Queille, minister of agriculture, opened the session with an address in which he called to mind the purposes of the bureau. The assembly chose as the main topic for discussion at its next session "The Prophylaxis of Rabies and of Aphthous Fever."

Killing of Physician by Insane Patient

Another case of killing of a physician by an insane person has occurred. It is the third case in three months. Such occurrences are becoming altogether too frequent and point to a lack of proper precautions. On March 9 the patient accosted the chief physician of the hospital, Dr. Guilpin, in a garden path, chatted with him familiarly for a few moments on commonplace subjects, and then, without apparent motivation, as the physician passed on, fired two shots into his back.

GENEVA

(From Our Regular Correspondent)

Feb. 25, 1927.

International Health Office

In its ordinary session, the Committee of the International Office of Public Hygiene received various communications. The decreasing importance manifest in various countries in respect to terminal disinfection and disinfection during the actual progress of the infective disease is noted. There has been great development in Italy and Egypt in the control of malaria, while in England measures against the mental sequelae of epidemic encephalitis are to be noted. Much attention has been given to the treatment of scarlet fever by serotherapy and vaccination. In England, this disease is usually benign; complications are more frequent—even when patients are well cared for—in private practice than in hospitals. Taking this into consideration, the Metropolitan Asylums Board of London has decided that the priority of hospitalization of contagious cases shall be established in the following order: diphtheria, scarlet fever, measles and whooping cough.

A group of sanitary officers who visited the Baltic and North Sea ports examined the control of ships on their arrival, disinfection, deratization and rat-proofing, facilities for the treatment of venereal diseases, rest-houses, and the Institutes of Tropical Medicine of Hamburg, London and Amsterdam. On the whole, the officers approved these measures and institutions. In respect of the treatment of veneral diseases, Great Britain now has eighty-nine centers in a total of fifty-nine ports. The struggle against cancer continues in Great Britain, France, Italy, Switzerland, Holland, Japan and Russia. Anticancer centers have been established for diagnosis and early treatment. Observations made in Switzerland, Russia and Japan would seem to attribute to diet an influence over the production of malignant neoplasms.

The fauna of rodents and their fleas in relation to the plague is a complicated subject on account of the great diversity of zoological nomenclature. Yet from a study already quite advanced, the following conclusions may be drawn: 1. The plague, penetrating the hinterland of certain areas of Asia,. Africa and America, sets up, by contamination of wild rodents sensitive to the virus, permanent enzootic foci of plague. The habitat of its carriers is desert regions—steppes, veldts and the like. 2. This pestigenous fauna varies with the invaded districts, and there almost always are various species attacked; it is only a single species or a group of similar species which represents the reservoir of the virus 3. Although the interzootic and interhuman exchange may take place by various ways of transmission, the principal part is vested in ectoparasites, especially fleas, all capable of biting man. 4. Plague in wild rodents assumes certain special aspects. Lymph node localizations may occasionally reach the stage of bubo; visceral localizations are very accentuated, especially in the lungs. In hibernant animals the infection may remain localized at the point of inoculation, only to burst forth in an acute fashion at the time of awakening. Thus plague may develop without bacteremia in benign cases. 5. Human plague assumes ordinary characters. Yet pneumonic plague becomes frequently mixed with it, with a remarkable predominance in Manchuria. This pneumoplague is consecutive to bubonic and septicemic plague, but apparently it can be contracted either from the pulmonary zooplague of wild rodents or from the plague virus existing in bodies of animals or skins—a genesis similar to the plagues dubbed "laboratory," which in most instances are pulmonary plagues. 6. Prophylaxis has had in view the extermination of the wild rodent, which is costly and difficult. Yet it is possible to develop an area around habitations in which dangerous animal species can be reduced to the minimum either by poisons, explosives or by asphyxiating gas. Contrary to what has been done up to the present, the breeding of species, the natural enemies of field rodents, should be favored—carnivorous birds, reptiles and animals. General paralysis is on the decrease in certain countries, particularly England and Czechoslovakia. Treatment of this disease by inoculation of malarial parasites seems to be favorable, although a definite decision would be premature.

Antivenereal Society

The Swiss Antivenereal Society continues its activity. The Geneva Section is represented by the Antivenereal Committee of the Geneva Red Cross. Two antivenereal dispensaries are doing excellent work and are greatly appreciated by the working class. During the year 1925, not a single instance of primary chancre was reported and only six new cases of active syphilis have been registered. As the old regularly treated cases of syphilis become eliminated from the antivenereal consultations, the expenses of the Red Cross are markedly decreasing.

The experience gleaned from public lectures to the young people of both sexes in the high schools on sexual hygiene has been excellent, and the department of public instruction of Geneva asked for their continuation during 1926, which was done. It is probable that these lectures will become a permanent subject on the program of regular high school instruction, as it is one of the best means of carrying out antivenereal propaganda. They have been favorably received both by parents and by pupils. Brothels were abolished and police control of prostitution took effect at midnight, Nov. 30, 1925. Propaganda posters sent to factories in the canton of Geneva have been well received by most directors. From Lausanne came similar optimistic reports. Lectures have been given regularly to civilians and soldiers, have been accepted, and have now become a regular part of ordinary life. Two hundred large posters have been distributed throughout the canton of Vaud and aside from some individual refusals resulting from motives of exaggerated and superannuated modesty, they have been favorably accepted.

The general meeting which took place last November brought together a large assembly of the public which took great interest in the propaganda film entitled "Human Miseries," given for the first time at Lausanne.

The systematic ferreting out of syphilis among convicts in the cantonal penitentiary, carried out by Dr. Gay, physician to this institution, has given the following results: Of eighty-seven blood examinations made when the convicts entered the prison, there were nine positive Wassermann reactions, nearly 10 per cent. Among these convicts, seven declared they had had syphilis, while the remainder stated that they had never had the slightest evidence of the disease and refused treatment. All the others, 78 per cent negative reac-

tions, stated that they had never had syphilis and did not show evidences of the disease. All those presenting real symptoms of the infection or recent manifestations offering dangers of transmission were completely treated.

There is not only a decrease but a total absence of recent cases of syphilis. During the entire year of 1925 there was not a single case of primary or secondary syphilis admitted to the special service of the General Hospital of Neuchâtel. Gonorrhea has likewise decreased, and fewer gonorrheal complications are encountered, thanks, perhaps, to propaganda; the patients consult in time and care for themselves more conscientiously than in former times.

VIENNA

(From Our Regular Correspondent)

March 15, 1927.

The New Health Insurance Law

A new bill provides that, from the existing three large groups of *krankenkassen*, smaller bodies composed of 1,500 or more members may "split off" and form new health insurance societies. In contrast with the universally recognized principle in insurance that "large numbers stabilize the risks," the proposed law supports the principle of decentralization and division into smaller bodies. The medical profession has announced to the government that, unless the new law shall furnish guaranties that their emoluments and pensions will be preserved intact, not a single physician will be permitted to accept a post with the new insurance societies, and that a general strike of all panel physicians will be declared. Such extreme measures are not very popular with the physicians, but a strike order would be obeyed if the leaders should consider it necessary to issue one.

Medical Congresses to be Held in Vienna in 1927

Four large medical congresses are to be held this year in Vienna. The annual session of the Deutsche Gesellschaft für Psychiatrie is scheduled for the middle of April. The fore part of June has been chosen for the seventh session of the Deutsche Gesellschaft für Hals-, Nasen- und Ohrenkrankheiten. The seventeenth session of the Deutsche Neurologische Gesellschaft will be held the middle of September, and, toward the end of the same month, the Congress for Diseases Due to Faulty Digestion and Metabolism. It is estimated that more than 2,000 physicians from foreign countries will attend the several congresses. Aside from the purely scientific transactions of the congresses, industrial and chemical exhibitions will be held. Whereas in the past such exhibits have been accessible only to professional men (physicians and physicists), there is now a tendency to admit the general public to exhibits of the latest acquisitions of technical hygiene and the auxiliary medical sciences (chemistry, pharmacy, optics, mechanics). A permanent exhibit of these sciences is being contemplated, possibly in connection with a university institute.

The Rat Menace in Vienna

The municipal health service of Vienna has solicited the cooperation of house owners and managers of buildings to combat the increasing rat plague. The health service has offered to supply house owners and agents with a gratuitous package of rat poison (arsenous oxide and typhoid bacilli), which must be used strictly according to directions. Owing to the frequent inundations throughout the city, large numbers of rats have been driven into the central districts of Vienna, where they have propagated undisturbed in basements and large warehouses until they have become a public menace. The fact that rats are known to be frequent carriers of disease makes their extermination imperative.

Statistical Data on Health Conditions in Vienna

At a recent meeting of the Vienna Senate, Professor Tandler gave some figures computed by the municipal health service. In 1926, there were, in round numbers, 23,000 births and 26,000 deaths, so that the population would have decreased if there had not been a slight immigration. The infant mortality was 8 per cent, the same as the previous year. The birth rate, however, continues to decrease. In 1926, Vienna had only one outbreak of typhoid, with eighteen cases and two deaths. The number of mental affections resulting from alcoholism has increased by 5.8 per cent, the total number of cases having been 2,356. The number of venereal affections is again on the increase owing to the greater incidence of gonorrhea; syphilis, fortunately, is still retrogressing rapidly. The number of reported cases of measles, scarlet fever and diphtheria, in 1926, was 8 per cent less than for 1925. Tuberculosis showed a decrease, which was largely due to prophylactic measures instituted to protect the environment of reported cases. The progress in recent years in this respect will be seen from the following data: In 1924, only 25,113 patients were handled and were given advice by the tuberculosis control and welfare centers (the municipal consultation centers for tuberculous patients and those menaced by tuberculosis); in 1925, the number so advised increased to 43,500, and, in 1926, to 63,410. The number of municipal kindergartens for children (ages 3-6), which exercise hygienic control, increased from fifty-eight, in 1924, to ninety, with more than 8,000 pupils, in 1926. The school dental clinic which was installed three years ago rendered aid in 7,478 instances the first year. In 1926, 26,500 children in 120 schools were given dental examinations, while 89,614 children received treatment.

Protest of the University Senate Against the Appointment of Professors

The senate of the University of Vienna, a council composed of members of the faculty, recently requested the rector of the university to lodge with the government a formal protest against the appointment of two professors who had been appointed against the will of the senate. It has been the custom in the past for only such men to be appointed as have been proposed by the senate. In the two cases mentioned there was suspicion that political influence had been invoked. The protest did not avert the appointments, but it constituted a marked demonstration against such occurrences.

Organization of the Crusade Against Rheumatism

A Committee for Combating Rheumatism was recently formed in Vienna. It will function as a chapter of the international league against rheumatic affections, which has been founded in England. Heading the committee are Professors Wenckebach, Strasser and Freund, and, as a representative of the government, Dr. Rosenfeld of the public health service will collaborate. At the opening session, Professor Wenckebach stated that a crusade similar to that waged against tuberculosis for the past forty years was contemplated. In Austria every twelfth workman has rheumatism; especially printers, metal workers and lithographers are subject to it, as Dr. Rosenfeld pointed out. The average occupational incapacity resulting from rheumatism is shown in the data collected by the *krankenkassen*, according to which acute rheumatic affections cause fifteen days and chronic affections fifty-two days incapacity, each year. In 1925, more than $300,000 was paid in Austria to rheumatic workmen as sick benefits. Appropriate treatment will make 65 per cent of such invalids able to work. Professor Freund and Dr. Goldstern emphasized the need of special clinics for rheumatic patients.

BERLIN

(From Our Regular Correspondent)

March 19, 1927.

General Paralysis in Negroes and Indians

Kraepelin, the recently deceased psychiatrist of Munich, together with his co-worker Professor Plaut, undertook last year a journey to America to carry on researches concerning the incidence and the pathologic aspects of general paralysis among negroes and Indians. Professor Plaut points out that syphilis, although rarely found among the negroes of North America before the abolition of slavery, has since become widespread, and is now three times as prevalent among them as it is among the white population. The course of syphilis among the negroes shows certain peculiarities as compared with the manifestations of the disease among white persons. The differences are explainable, in part, from the more frequently superficial treatment of the disease in negroes. That applies especially to the frequent recurrences and to the greater incidence of gummas and syphilis of the bones. But the different aspects of the disease are due, in part, to other causes; this is true of the greater frequency of pustulopapular and pustular frambesia types and pustulosquamous exanthems. The statements of the older authors that general paralysis in North American negroes was rare a few decades ago, Plaut does not accept absolutely, and cites in refutation official statistics covering the year 1880, which show that "paresis" was then common among negroes. Although widely different disorders may have been grouped under the term "paresis," Plaut is inclined to assume that the infrequency of general paralysis during the days of slavery was due to the low incidence of syphilis among the negroes at that time. Official statistics, however, show that, up to 1910, the incidence of general paralysis among the white population exceeded that among the negroes, and that a marked paralysis morbidity among the negroes was not observed before 1922. But since syphilis of the brain is four times as frequent among the negroes as among white persons, Plaut is inclined to believe that in the statistics a considerable percentage of the cases of general paralysis have been recorded under syphilis of the brain. Plaut has no explanation for the remarkable infrequency of tabes among the negroes, which is supported by numerous reports in the literature. Also syphilis among the negroes of Cuba offers certain distinctive characteristics that differentiate it from the syphilis occurring in white persons; circinate syphilids, gummas and syphilis of the bone are found among the negroes more frequently than among white persons, which is doubtless due, in part, to superficial treatment. In spite of the fact that syphilis is widely prevalent in the whole population, general paralysis among the negroes is apparently rare. Nor is general paralysis among the white population very frequent; however, there were twenty white patients affected with general paralysis in the institution visited by Plaut.

As to syphilis among the North American Indians, it is difficult to make any general statements; its incidence is not everywhere the same; in some tribes it is said to be frequent and in others rare. According to the reports of American physicians, the manifestations of syphilis among the Indians do not differ from those encountered in white persons. The disease does not take on a more grave form in Indians, nor are tertiary affections more common in Indians than in white persons. The Indians requiring institutional care for psychopaths are collected in cantonments, where Kraepelin and Plaut made their researches. It was found that about 10 per cent of the men and 7 per cent of the women gave a positive Wassermann reaction, but that among the ninety-six interned patients none were affected with general paralysis. Among the 300 syphilitic patients admitted to the institution since 1908 there had been only two affected with general paralysis, one of these having general paralysis associated with tabes. At the request of the government, the records of all the psychopathic institutions concerned were examined for evidence of the admission of patients with general paralysis and the observations of nearly all the physicians of the Indian Medical Service were secured, whereby a few more cases were established with more or less probability. The result of the laborious investigations was the opinion that the general paralysis among the North American Indians is at least a rare occurrence; the same is apparently true of tabes. Concerning the incidence of general paralysis among the Mexican Indians, researches were made in the hospital for the insane in Mexico City. Syphilis is widespread among the Indians of the capital. There was said not to be a difference between the manifestations and course of syphilis among the pure-blooded Indians and white persons. According to Plaut's opinion, general paralysis is just as widespread among the syphilitic Indians of Mexico City as among the syphilitic population of North America and Europe.

Declaration Against the Use of Alcohol

In advertisements of firms interested in the sale of alcoholic beverages, the statement was often seen, during the recent epidemic of influenza, that alcohol has a prophylactic and therapeutic value in the disease. As a consequence, the Berliner Medizinische Gesellschaft, at the suggestion of its chairman, Geheimrat Kraus, decided to publish the declaration that it disapproved of advertisements recommending alcohol as a prophylactic and therapeutic remedy in influenza.

The Excess of Physicians in Germany

In spite of all the warnings against taking up the study of medicine that have been uttered by the executive committees of the large medical organizations from year to year, the onrush of secondary school graduates desirous of taking up medicine has scarcely been checked. During the war, so-called emergency diplomas were issued in great numbers to advanced students. Furthermore, many physicians from the ceded territory of Germany have moved into the present *reich*. The economic status of the younger generation of physicians has been affected by the weakened average financial condition of the middle class. Furthermore, the position of young physicians has been unfavorably influenced by social legislation. In 1923, the government, in order to control the discrepancy between the number of panel physicians and the limited financial strength of the *krankenkassen*, limited the number of new physicians to be admitted to the panel. As a result, there are at present in Germany 3,000 registered applicants for positions on the panel, many of whom will have to wait several years before they can be admitted to panel practice. In addition, there are about 7,000 young physicians who are occupying assistantships and during such time are of course not allowed to apply for admission to panel practice. Comparison of the present number of medical students and the number of physicians removed from the field each year by reason of death and invalidity shows that an excess of physicians for many years to come is inevitable.

Growth of the International Association of Physicians

A further step toward the restoration of international economic and professional relations may be seen in the entrance of the Deutscher Aerztevereinsbund, with its 35,000 members, into the International Association of Physicians. This international organization, which now includes the physicians of twenty-three nations, is based on the principle of absolute equality, and the manner of its organization, the makeup of the executive committee, and the choice of permissible languages, insure to the medical profession of Germany the influence in the assembly to which it is rightfully entitled.

Marriages

MATTHEW EMERY HAZELTINE, Rochester, Minn., to Miss Mildred May Emmerton of San Francisco, at Omaha, January 22.

SAMUEL L. CROW, Asheville, N. C., to Miss Eunice Elizabeth Mathews of Atlanta, Ga., March 19.

HEYWOOD HILL HOPKINS, Thomasville, Ga., to Miss Jeanne Halsted of Westfield, N. J., February 28.

ROLAND E. KALMBACH, Lansing, Mich., to Miss Josephine Vriesenga of Grand Rapids, in March.

WILLIAM W. CRANE, Rochester, Minn., to Miss Isabelle O'Reilly, March 20.

Deaths

Charles Howard Peck ✠ Newtown, Conn.; Columbia University College of Physicians and Surgeons, New York, 1892; member of the Medical Society of the State of New York, the American Surgical Association, the Southern Surgical Association and the American Society of Clinical Surgeons; past president of the Medical Society of the County of New York; professor of clinical surgery at his alma mater; on the staffs of the Roosevelt, French, Memorial, and Ruptured and Crippled hospitals, New York, the Vassar Brothers Hospital, Poughkeepsie, the Stamford (Conn.) Hospital, the White Plains (N. Y.) Hospital and the Greenwich (Conn.) Hospital; served in France during the World War as director of Base Hospital number 15, at Chaumont; was awarded the Distinguished Service Medal; for several months, chief of the department of general surgery, Surgeon General's Office, Washington, D. C.; aged 56; died, March 28, of pernicious anemia.

Walter Belknap James, New York; Medical Department of Columbia College, New York, 1883; member of the Medical Society of the State of New York, and the Association for Research in Nervous and Mental Diseases; life trustee, since 1903 member of the council, and formerly professor of clinical medicine at his alma mater; trustee of the American Museum of Natural History; served as head of the state board of charities and as chairman of a special commission to study the feble-minded; on the staffs of the Bellevue Hospital, Hospital for the Ruptured and Crippled, Lincoln Hospital, New York Eye and Ear Infirmary and the Manhattan Eye, Ear and Throat Hospital; aged 68; died, April 10, of heart disease.

Richard Jones Phillips, Upper Darby, Pa.; Jefferson Medical College of Philadelphia, 1883; member of the Medical Society of the State of Pennsylvania, and the American Ophthalmological Society; formerly on the staffs of the Jefferson, Wills Eye and Presbyterian hospitals, the Presbyterian Orphanage and the Friends Home for Children; contributor to a textbook on diseases of the eye; aged 65; died, March 30.

George Betton Massey ✠ Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1876; formerly on the staffs of the State Hospital for Insane, Danville, Pa., the Infirmary for Nervous Diseases, and the Howard and American Oncologic hospitals, Philadelphia; author of books on electrotherapeutics; aged 70; died, March 29.

Robert Fulton Weir ✠ New York; Medical Department of Columbia College, New York, 1859; emeritus professor of surgery at his alma mater; Civil War veteran; member and past president of the American Surgical Association; attending surgeon to the New York Hospital, 1876-1900; aged 89; died, April 6.

Frederic Joseph Souba ✠ Minneapolis; University of Minnesota Medical School, Minneapolis, 1910; assistant professor of obstetrics and gynecology, at his alma mater; on the staff of the Minneapolis City Hospital; aged 40; died, March 7.

Philip Prescott Lewis ✠ Gorham, Maine; Medical School of Maine, Portland, 1898; aged 56; died, Nov. 30, 1926, at the Maine General Hospital, Portland, as the result of a cholecystectomy and an appendectomy.

Norman Tott Hale, Fort Wayne, Ind.; Rush Medical College, Chicago, 1886; served in the World War; on the staff of the Indiana School for Feebleminded Youths; aged 62; died, March 25, of acute nephritis.

Anthony Robert Mavity, Marlow, Okla.; Central Medical College of St. Joseph, 1902; member of the Oklahoma State Medical Association; served during the World War; aged 46; died, February 5, of heart disease.

Charles Rothe Rice ✠ Augusta, Ky.; University of Louisville School of Medicine, 1907; president of the Bracken County Medical Society; served during the World War; aged 45; died suddenly, March 12.

Elmo Patton Porterfield, St. Louis; Rush Medical College, Chicago, 1899; member of the Missouri State Medical Association; member of the city board of health; aged 52; died, March 4, at Legion, Texas.

Dickenson Ober Wheelock ✠ Miller, S. D.; University of Louisville School of Medicine, 1908; aged 41; died, January 3, at St. Mary's Hospital, Rochester, Minn., of carcinoma of the pancreas and liver.

Adelbert D. McIntyre, Bradford, Ill.; Kentucky School of Medicine, Louisville, 1891; member of the Illinois State Medical Society; aged 71; died, March 13, of bronchiectasis and myocarditis.

David Fiske ✠ Chicago; Rush Medical College, Chicago, 1900; assistant clinical professor of laryngology and otology at his alma mater; aged 54; died, March 31, at Evanston, of heart disease.

Edward Francis McKenna, Providence, R. I.; Medical School of Harvard University, Boston, 1909; aged 46; died, March 23, of cerebral hemorrhage, uremia and chronic nephritis.

Frank Cornelius Skinner, Brooklyn; Medico-Chirurgical College of Philadelphia, 1894; for twenty-nine years member of the health department; aged 62; died, April 6, of heart disease.

John Bennett Kring, Galion, Ohio; University of Tennessee College of Medicine, Memphis, 1893; served during the World War; aged 63; died, February 12, of cerebral hemorrhage.

William August Keller ✠ Louisville, Ky.; University of Louisville School of Medicine, 1893; Louisville Medical College, 1898; aged 59; died March 18, of angina pectoris.

Charles Walter Goddard ✠ Austin, Texas; Louisville (Ky.) Medical College, 1894; chief of health service, University of Texas; aged 57; died, March 14.

Clarence Halleck Hulse, Brooklyn; University of California Medical School, San Francisco, 1893; aged 55; died March 21, of chronic myocarditis.

Joseph Kucher, Riverdale, N. J.; University of Vienna, Austria, 1874; aged 80; died, February 12, at the Hackensack (N. J.) Hospital, of carcinoma.

George F. Mitchell, Beaver Dam, Ky.; University of Louisville School of Medicine, 1877; also a druggist; aged 83; died, March 18, of bronchitis.

Frank Charles Holgate, Almira, Wash.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1906; aged 52; died, March 11, of empyema.

Roch Auguste Paradis ✠ Canton, Ohio; Laval University Faculty of Medicine, Quebec, Que., Canada, 1891; aged 61; died, March 7, of pneumonia.

Walter Booth Whiting, Malden, Mass.; Philadelphia University of Medicine and Surgery, 1872; aged 82; died, February 25, of angina pectoris.

George Krans Sabine ✠ Brookline, Mass.; Medical School of Harvard University, Boston, 1873; aged [illegible]; died, March 21, following a long illness.

Samuel Milton Rainey, Starkville, Miss.; University of Nashville Medical Department, 1871; aged 77; died, in March, of dilatation of the heart.

William Gould Taylor ✠ Buffalo; Niagara University Medical Department, Buffalo, 1893; aged 58; [illegible]ed, March 22, of arteriosclerosis.

Michael Stein ✠ Chicago; Northwestern University Medical School, Chicago, 1922; aged [illegible]; died, February 10, of heart disease.

Henry Hudson Braley, Concord, Mass.; Boston University School of Medicine, 1889; aged 74; died, in March, of cerebral hemorrhage.

William Horace Burr, Detroit; University of Michigan Medical School, Ann Arbor, 1865; aged 83; died, March 16, of neuritis.

Herman C. Weiskopf ✠ Chicago; Northwestern University Medical School, Chicago, 1900; aged 59; died, March 12, of carcinoma.

THE WASHINGTON SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTY-EIGHTH ANNUAL SESSION WASHINGTON, D. C., MAY 16-20, 1927

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventy-eighth annual session of the American Medical Association will be held in Washington, May 16-20, 1927.

The House of Delegates will convene at 10 a. m., Monday, May 16. In the House the representation of the various constituent associations for 1926, 1927 and 1928 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	5	New York	14
Colorado	2	North Carolina	3
Connecticut	2	North Dakota	1
Delaware	1	Ohio	7
District of Columbia	1	Oklahoma	3
Florida	1	Oregon	1
Georgia	3	Pennsylvania	10
Idaho	1	Rhode Island	1
Illinois	10	South Carolina	2
Indiana	4	South Dakota	1
Iowa	4	Tennessee	3
Kansas	3	Texas	6
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	2	Virginia	3
Maryland	2	Washington	2
Massachusetts	6	West Virginia	2
Michigan	5	Wisconsin	3
Minnesota	3	Wyoming	1
Mississippi	2	Alaska	1
Missouri	5	Hawaii	1
Montana	1	Isthmian Canal Zone	1
Nebraska	2	Philippine Islands	1
Nevada	1	Porto Rico	1

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the general meeting to be held at 8:30 p. m., Tuesday, May 17. The sections will meet Wednesday, Thursday and Friday, May 18, 19 and 20, as follows:

CONVENING AT 9 A. M., THE SECTIONS ON

- Practice of Medicine.
- Obstetrics, Gynecology and Abdominal Surgery.
- Laryngology, Otology and Rhinology.
- Pathology and Physiology.
- Urology.
- Orthopedic Surgery.
- Preventive and Industrial Medicine and Public Health.

CONVENING AT 2 P. M., THE SECTIONS ON

- Surgery, General and Abdominal.
- Ophthalmology.
- Diseases of Children.
- Pharmacology and Therapeutics.
- Nervous and Mental Diseases.
- Dermatology and Syphilology.
- Gastro-Enterology and Proctology.
- Radiology.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., Monday, Tuesday, Wednesday and Thursday, May 16, 17, 18 and 19, and from 8:30 a. m. to 12 noon, Friday, May 20.

WENDELL C. PHILLIPS, President.
FREDERICK C. WARNSHUIS, Speaker, House of Delegates.
OLIN WEST, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to the Secretary in time to be included:

STATE DELEGATES

ALABAMA
W. M. Cunningham, Corona.
S. W. Welch, Montgomery.
Scale Harris, Birmingham.

ARIZONA

ARKANSAS
H. D. Wood, Fayetteville.
William R. Bathurst, Little Rock.

CALIFORNIA
Victor G. Vecki, San Francisco.
Percy T. Magan, Los Angeles.
Dudley Smith, Oakland.
Albert Soiland, Los Angeles.
Robert Pollock, San Diego.

COLORADO
L. H. McKinnie, Colorado Sp'gs.
T. E. Carmody, Denver.

CONNECTICUT
John Edward Lane, New Haven.
Walter Ralph Steiner, Hartford.

DELAWARE
W. O. LaMotte, Wilmington.

DISTRICT OF COLUMBIA
Philip S. Roy, Washington.

FLORIDA

GEORGIA

IDAHO
George R. Proctor, Nampa.

ILLINOIS
J. W. Van Derslice, Oak Park.
R. W. McInnes, Belvidere.
E. W. Fiegenbaum, Edwardsville.
Charles E. Humiston, Chicago.
R. L. Green, Peoria.
John S. Nagel, Chicago.
William Allen Pusey, Chicago.
T. O. Freeman, Mattoon.
Charles J. Whalen, Chicago.
E. P. Sloan, Bloomington.

INDIANA
E. M. Shanklin, Hammond.
Albert E. Bulson, Jr., Ft. Wayne.
Harry Elliott, Brazil.
David Ross, Indianapolis.

IOWA

KANSAS
J. F. Hassig Kansas City.
F. A. Carmichael, Osawatomie.
Alfred O'Donnell, Ellsworth.

KENTUCKY
H. A. Davidson, Louisville.
A. T. McCormack, Louisville.
Irvin Abell, Louisville.

LOUISIANA
S. M. Blackshear, New Orleans.
W. H. Seemann, New Orleans.

MAINE
Bertram L. Bryant, Bangor.
Frank Y. Gilbert, Portland.

MARYLAND
Charles O'Donovan, Baltimore.

MASSACHUSETTS
F. B. Lund, Boston.
E. F. Cody, New Bedford.
R. I. Lee, Boston.
H. G. Stetson, Greenfield.
C. E. Mongan, Somerville.
J. F. Burnham, Lawrence.

MICHIGAN
F. C. Warnshuis, Grand Rapids.
Carl F. Moll, Flint.
C. S. Gorsline, Battle Creek.
J. D. Brook, Grandville.
L. J. Hirschman, Detroit.

MINNESOTA
J. C. Litzenberg, Minneapolis.

MISSISSIPPI

MISSOURI

MONTANA
Creswell T. Pigot, Roundup.

NEBRASKA
A. D. Dunn, Omaha.
R. W. Fouts, Omaha.

NEVADA
Horace J. Brown, Reno.

NEW HAMPSHIRE
D. E. Sullivan, Concord.

NEW JERSEY
John F. Hagerty, Newark.
Henry B. Costill, Trenton.
W. Blair Stewart, Atlantic City.

NEW MEXICO
H. A. Miller, Clovis.

NEW YORK
E. Eliot Harris, New York.
Daniel S. Dougherty, New York.
James N. Vander Veer, Albany.
N. B. Van Etten, New York.
J. Richard Kevin, Brooklyn.
George A. Leitner, Piermont.
Orrin S. Wightman, New York.

NORTH CAROLINA
M. L. Stevens, Asheville.
W. D. James, Hamlet.
J. G. Murphy, Wilmington.

NORTH DAKOTA
E. A. Pray, Valley City.

OHIO

OKLAHOMA
McLain Rogers, Clinton.
W. Albert Cook, Tulsa.
E. S. Lain, Oklahoma City.

OREGON

PENNSYLVANIA
Charles C. Cracraft, Claysville.
J. N. Hunsberger, Norristown.
William H. Mayer, Pittsburgh.
John A. Campbell, Williamsport.
Arthur E. Crow, Uniontown.

John H. Murray, Punxsutawney.
Orlando H. Petty, Philadelphia.
Walter F. Donaldson, Pittsburgh.
J. Norman Henry, Philadelphia.
Samuel P. Mengel, Wilkes-Barre.

RHODE ISLAND
Roland Hammond, Providence.

SOUTH CAROLINA
J. H. Cannon, Charleston.

SOUTH DAKOTA
R. L. Murdy, Aberdeen.

TENNESSEE
J. A. Witherspoon, Nashville.

TEXAS
J. W. Burns, Cuero.
A. C. Scott, Temple.
C. M. Rosser, Dallas.

UTAH
E. M. Neher, Salt Lake City.

VERMONT
William G. Ricker, St. Johnsbury.

VIRGINIA
Southgate Leigh, Norfolk.
Stuart McGuire, Richmond.
John W. Preston, Roanoke.

WASHINGTON
Frederick Epplen, Spokane.

WEST VIRGINIA
Henri P. Linsz, Wheeling.
James R. Bloss, Huntington.

WISCONSIN
Joseph F. Smith, Wausau.
J. M. Dodd, Ashland.
H. M. Brown, Milwaukee.

WYOMING

ALASKA

HAWAII

ISTHMIAN CANAL ZONE

PHILIPPINE ISLANDS
Carmelo Reyes, Manila.

PORTO RICO

GOVERNMENT SERVICES
United States Army, Joseph F. Siler.
United States Navy, Dudley N. Carpenter.
nited States Public Health Service, W. F. Draper.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
Henry A. Christian, Boston.

SURGERY, GENERAL AND ABDOMINAL
Urban Maes, New Orleans.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
John O. Polak, Brooklyn.

OPHTHALMOLOGY
W. H. Wilder, Chicago.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Burt R. Shurly, Detroit.

DISEASES OF CHILDREN
Isaac A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
Paul D. White, Boston.

PATHOLOGY AND PHYSIOLOGY
D. J. Davis, Chicago.

NERVOUS AND MENTAL DISEASES
Tom B. Throckmorton, Des Moines, Iowa.

DERMATOLOGY AND SYPHILOLOGY
Howard Fox, New York.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
W. S. Leathers, Nashville, Tenn.

UROLOGY
A. L. Chute, Boston.

ORTHOPEDIC SURGERY
H. W. Orr, Lincoln, Neb.

GASTRO-ENTEROLOGY AND PROCTOLOGY
Frank Smithies, Chicago.

RADIOLOGY
James T. Case, Battle Creek, Mich.

WASHINGTON AUDITORIUM

WASHINGTON

The Nation's Capital as the Convention City

The American Medical Association meets this year in the capital of the nation after an interval of fifty-seven years. In 1870, five years after the close of the Civil War, the city had a population of 131,700. Now it is considerably more than half a million. The capital of the United States is one of the few capitals of the world created for the purpose. Its site, a peninsula jutting into the Potomac River and surrounded by an amphitheater of hills, was occupied by woods or farms during the entire colonial history of the country, and did not really exist as a place until seven years after the Revolutionary War. In 1790, as the result of a bargain made by Alexander Hamilton at a dinner arranged by Thomas Jefferson for the purpose, the location of the contemplated capital city was fixed for ten years at Philadelphia, and then permanently on the Potomac. Jefferson engineered the scheme and secured its adoption by agreeing with Hamilton that the Revolutionary War debts should be assumed by the federal government instead of by the states. Congress passed the enabling act in 1790, charging President Washington with the responsibility of selecting the exact location of the territory, which was to be 10 miles square and under the exclusive jurisdiction of Congress. Under the terms of the act, Washington was required to locate the capital on the Potomac River, somewhere between the Anacostia River and the Conogochengne, a small stream flowing into the Potomac, 100 miles away. Washington selected the location as it is at present on a part of the river just 12 miles above his home at Mount Vernon.

HOW WASHINGTON SELECTED WASHINGTON

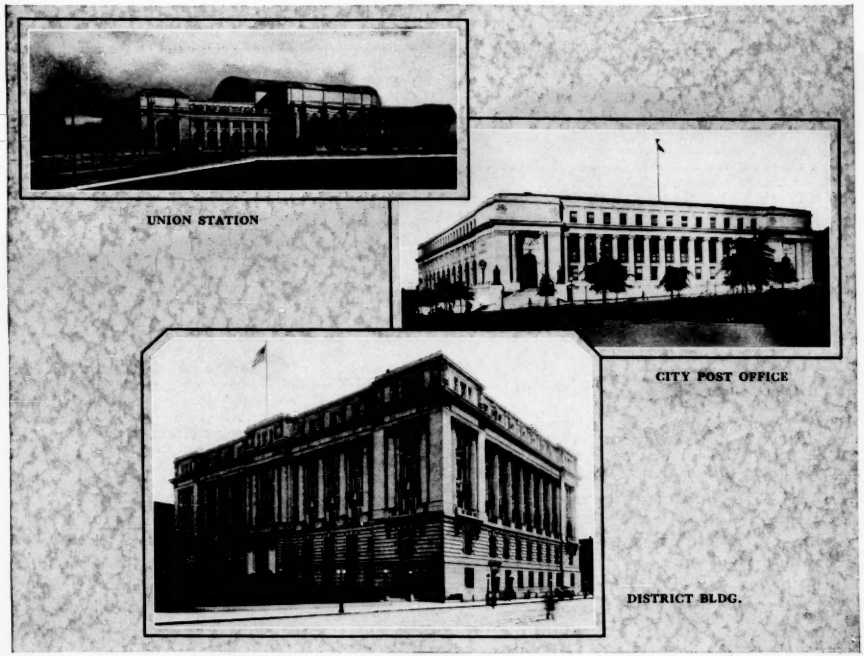
Until the Father of his Country was of middle age, the site of the greatest capital of the greatest nation in the world was a partly cultivated amphitheater surrounded by heavily wooded hills and swamps. As a young man Washington had frequently sailed by the site in his sloop on his way to Georgetown. It is said that on these excursions he developed the fascination for the picturesque locality that induced him later to lend his great influence in favor of its selection. As

he tacked his way up stream, he may have pictured in his mind's eye great buildings of architectural beauty and proportion adorning those pleasant hills, wide avenues and streets intersecting in all directions. He dreamed, perhaps, a vista of the future nation's seat of government. These dreams two of his intimate friends, Jefferson and Madison, shared later with equal enthusiasm. Washington bargained with the seventeen landowners whose properties extended from the Anacostia River to Rock Creek and from the Potomac River to the range of hills now marked by Florida Avenue, which was to be the northern boundary of the contemplated city. One of these landowners was a canny Scotchman, Davy Burns. Burns' cottage, which still stood in the memory of many now living, was located at Seventeenth Street and the lost his temper and said, "Had not the federal city been laid out here you would have died a poor tobacco planter."

"Ay mon," Burns is said to have retorted, "an had ye nae married the widow Custis wi a' her naggers ye would a been a land surveyor and a dom poor one at that."

Washington arose and started to go; then turning, he said emphatically, "I have selected your farm, Mr. Burns, as a part of the federal city, and the government will take it under the right of eminent domain. Now, it will be better for you to enter into an amicable agreement. I will ask you for the last time on what terms you will surrender your land."

Burns must have noticed the determined expression on the President's face and saw that he was dealing with a will power as strong as his own. He knew what confiscation



UNION STATION

CITY POST OFFICE

DISTRICT BLDG.

Speedway, where now the most beautiful of Washington's smaller public buildings, the Pan-American Union, shines out like an alabaster jewel set in jade. It is said that President Washington came all the way up from Mount Vernon to see Davy Burns personally, as the latter had obstinately refused at first to relinquish his property on the terms proposed by Washington and his commissioners. Seated on a rustic bench near the Scotchman's old cottage, the Father of his Country attempted to convince the irascible Burns of the benefits that would accrue to him by surrendering his lands on the prescribed terms. To all these arguments of the President, Burns turned a deaf ear, saying, "I suppose you think people here are going to take every grist that comes from your mill as pure grain, but what would you hae been if ye had nae married the widow Custis?"

Washington held his temper characteristically and tried to impress Burns with the fact that the location of the new city, so as to include his lands, would make him rich. But David remained obdurate until finally the President is said to have meant, so he quickly replied, "Your Excellency, I will exchange my lands on any terms you may chance to offer."

THE PLANNING OF THE CITY

Major Pierre Charles L'Enfant, a young French engineer who had served in the Revolution, was appointed by Washington to design the federal city. He planned it on a style at once comprehensive and attractive, and adapted to the physical features of the land. Jefferson, a man of culture, vision and artistic refinement, took an active and sympathetic part in the planning. L'Enfant's plan was based partly on the French city of Versailles and partly on the ancient city of Babylon, with striking focal points (squares, circles, triangles), radiating avenues and such dispositions of the public buildings as should and did create a dazzling and beautiful ensemble in which every part has organic relations with the rest. But L'Enfant's plan to him was only a dream; he did not live to see his great federal city develop further than from a straggling village when he died in 1825.

L'Enfant, like many geniuses, had so many eccentricities of character that he soon involved himself in disputes with the commissioners, which led to his resignation. Indignantly he refused to accept the generous financial offer which Washington insisted he should take, with the result that for a quarter of a century—old, infirm, attired in a long coat with brass buttons, a bell-crowned hat and knobbed cane—he made almost daily pilgrimages to the Houses of Congress in a sad and futile attempt to recover his allowance. He died a pauper, and was buried by a kind friend on his farm near the city which he had imagined. Within recent years his grave was found after a search and the body transferred to a costly sarcophagus in Arlington—a monument whose cost would have enabled him to spend his sad and declining years in affluence instead of in penury and want.

Washington believed firmly that the Potomac River was destined to become the future commercial highway between the East and the Middle West. The development of railroads changed the situation. Washington, instead of a commercial metropolis of the republic, has developed into its political, social and artistic center.

BUILDING THE WHITE HOUSE

The Capitol and White House were the first buildings started, the former begun by Thornton, the latter by Hoban. Many persons are curious to know why the President's mansion is called the White House. Built originally of Virginia freestone, it had a sandstone color. When the British soldiery set fire to it in 1814, at the time of their invasion, its exterior became so blackened that, when restored, its walls were painted white and it was given the name White House, which, by general consent, has been its designation ever since.

The cornerstone of the White House was laid in 1792; that of the Capitol in 1793. In the summer of 1800, the entire force of government clerks, 123 in number, with all the government paraphernalia, moved from Philadelphia to Washington.

The President's palace, as it was called then, was not entirely completed when President John Adams and Mrs. Adams moved in. Mrs. Abigail Adams wrote entertainingly and wittily of the lack of accommodations, and described how she hung the clothes lines, for drying clothes, in the famous East Room. It was impossible to get wood for the fire, though the White House was surrounded by a forest. "And yet," she wrote "it is a beautiful spot, capable of any improvement, and the more I view it the more I am delighted with it."

EARLY DAYS IN WASHINGTON

Pennsylvania Avenue was a mud hole covered with bushes. There was a hotel east of the Capitol with accommodations so limited that only the Speaker of the House had an apartment to himself. Many of the members found quarters in Georgetown, now a part of the capital city, and rode to and from the Capitol in coaches.

Washington was called the "City of Magnificent Distances," a phrase applied to it sarcastically in the early part of the last century because of the great distances between the houses, which were scattered over a wide area, with bad roads and sometimes even forests between. Many shafts of ridicule were hurled at the new city in the same epoch. A witty Frenchwoman referred to Washington as a "city of streets without houses," and at the same time she referred to Georgetown as a "city of houses without streets."

Tom Moore, the Irish poet, visited Washington during Jefferson's first administration and wrote some satirical verses about the new city which have been much quoted. In order to appreciate the lines fully one must know that a man by the name of Pope settled in the middle of the seventeenth century on what became Capitol Hill and called his place "Rome." The creek which passed through the city and flowed along the foot of Capitol Hill he called the Tiber. The lines generally quoted are:

> In fancy now below the twilight gloom
> Come let me lead thee o'er this modern Rome
> Where tribunes rule, where dusky Davi bow
> And what was Goose Creek once is Tiber now.
> This famed metropolis where fancy sees
> Squares in morasses, obelisks in trees;
> Which traveling fools and gazeteers adorn
> With shrines unbuilt and heroes yet unborn;
> Who naught but wood and Jefferson they see,
> Where streets should run and sages ought to be.

These witticisms on Washington have long since lost their point. The capital of the nation is now a beautiful city, one of the most beautiful in the world, universally admired and praised. It is difficult for most people ever to leave it, once they have resided within its bounds and come under the influence of the magic spell.

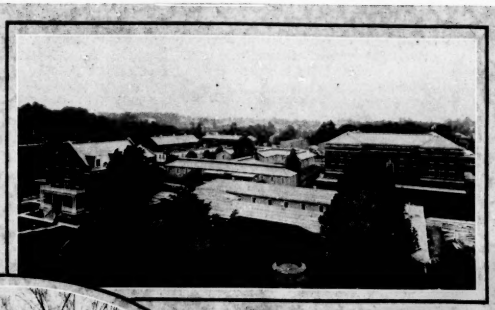
AFTER THE CIVIL WAR

Washington took on a tremendous growth during and after the Civil War. The city became transformed. In 1878, a new form of government was inaugurated, by which the constitutional provision giving Congress exclusive jurisdiction over the seat of government acquired an absolute meaning. Taxes were paid into the federal treasury, and twice the amount so collected might be appropriated by Congress to pay the expenses of civil government on the fair theory that half the property of the District of Columbia was the public property of the nation. This financial feature of the so-called Organic Act of 1878 has been recently modified so that the government of the United States pays less than half the cost of running the government of the District of Columbia. The right to vote, taken away from the citizens of the capital in 1878, has never been restored. Perhaps the American people would change this if they appreciated that the right of suffrage, for which their forefathers fought, is denied without any just reason to more than half a million of their fellow citizens—denied to them as a punishment for inhabiting the capital of the United States.

LOOKING OVER THE CITY

The visitor arriving at Union Station should walk out on the Plaza, south of the station, and get a view of the beautiful dome of the Capitol, surmounted by the Goddess of Liberty. During the first half century, the Capitol did not have the dome that now charms the eye. When the Civil War came, it was just springing into shape. President Lincoln commanded that work on it should not stop, and it was carried on continuously during that struggle. It contains 9,000,000 pounds of bottled iron plates. Its pearly whiteness is due to the fact that more than 4,000 pounds of paint are spread on it every few years, the job requiring thirty-five men for three months. Figures are sometimes tiresome, but it may be interesting to note that the Capitol building is more than 700 feet long, covers more than 150,000 square feet and, including the grounds, cost more than $25,000,000. Staggering as this figure really is, it is to be noted that if the German war reparations debt were to be paid in Capitol buildings and grounds, it would require more than a thousand of them. The bronze figure surmounting the dome, the Statue of Freedom, usually called the Goddess of Liberty, weighs 15,000 pounds and was placed in position when the Capitol was completed in 1863, during the midst of the strife of the Civil War.

If the visitor is sufficiently robust, a climb up the stairs to the top of the dome will well repay him. There is no elevator. On the way up he may obtain a close view of the wonderful but incomplete frescoes of Brumidi and Costaggini, Italian painters, both of whom died while working on these decorations. Once at the top, he may look out, with an unobstructed vision, on the beautiful panorama of the city and its encircling hills and silvered waters, along wide avenues radiating from the Capitol like the spokes of a wheel. The visitor to the Capitol building should walk to the center of the rotunda, from which point he may look through a long corridor to the south, and if perchance Congress is in session, he may see the Speaker of the House, Mr. Longworth, in the chair. In the opposite direction, through an equal vista, he may see the Vice President of the United States, Mr. Dawes, presiding over the Senate. If he is particularly fortunate, he may witness the entire Supreme Court of the United States, with the distinguished and genial Chief Justice, Mr. Taft, pass before him in review. Looking upward to the center of the great dome, one beholds the Brumidi canopy portraying the apotheosis of Washington.



WALTER REED HOSPITAL

COLUMBIA HOSPITAL

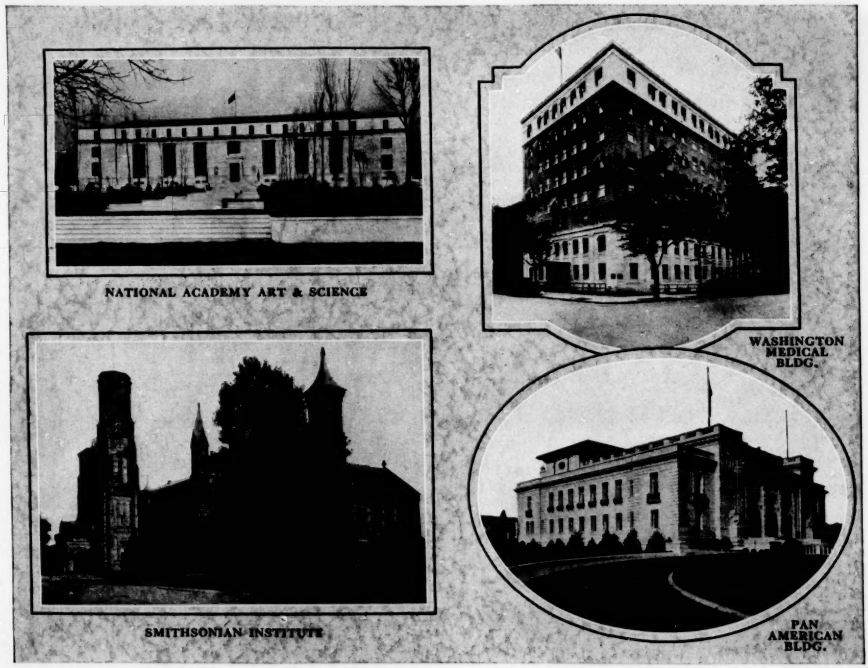
EMERGENCY HOSPITAL

WALTER REED HOSPITAL

EPISCOPAL EYE EAR THROAT HOSPITAL

Of course, the visitor to the Capitol will take in Statuary Hall, a room with more historical associations than any other room in America. In this chamber the old House of Representatives met for forty years. Here Abraham Lincoln, John Quincy Adams, Horace Greeley and Andrew Johnson served in the same Congress. Here Henry Clay welcomed Lafayette, and John Marshall administered the oath of office to Presidents Madison and Monroe. In 1825, the house here balloted for President on a contested election, and John Quincy Adams won over Andrew Jackson. Here John Quincy Adams, serving as a member of Congress after he had been President, was stricken with apoplexy and died; a bronze star in the floor marks the spot where he fell.

Few persons know that under the rotunda is a tomb. It is empty, however. It was intended to be the sepulcher of Washington, but the fates decreed otherwise, and the remains of the Father of his Country rest at Mount Vernon.



ALONG PENNSYLVANIA AVENUE

From the Capitol to the White House will usually be through Pennsylvania Avenue. Pennsylvania Avenue! There is no street in any city of our great country so entitled to distinction in history as this. It has borne the footprints of every president and vice president of our republic; also that of every senator and representative in Congress; every cabinet officer, supreme judge and ambassador. Every inaugural procession beginning with Jefferson's has paraded along its famous way. Think of the thousands of persons distinguished in our country's history, and the millions of American citizens who have gazed along its historic vista. All the messages and documents back and forth between the Capitol and the White House for a century, and more, have been carried over it. Along it have passed the funeral cortèges of three martyred presidents.

At Pennsylvania Avenue and Fifteenth Street one finds a nest of public buildings clustered together and faced as well as backed by beautiful parks. In the center of this group is the famous and historic White House, the President's mansion. To the east is the great Treasury, and to the west is the State, War and Navy Building.

During the presidency of Theodore Roosevelt, the White House was enlarged, remodeled in parts and certainly improved from both practical and esthetic senses. The cost of these improvements was nearly half a million dollars. The principal additions made at the time were the long wings on the east and west which, without detracting from the beauty of the central structure, have given much more room for the transaction of the voluminous business of the chief executive. The original White House constructed by Hobson had wings for offices and servants' quarters, but these were not restored in the reconstruction following the burning by the British in 1814. The street in front of the White House, really a part of Pennsylvania Avenue, is sometimes called Executive Avenue, and separates the mansion from LaFayette Square. This beautiful park, in the earliest days of the city, was a parade ground. In 1796, the Washington Artillery Company paraded on it, and when the Father of his Country retired from office, in 1797, and passed through Washington, a salute of sixteen guns was fired by this company here. In those days the beautiful park with its statues was an open field.

The Treasury and State, War and Navy Building are on ground originally occupied by executive buildings long since gone and forgotten. When the government moved to Washington in 1800, the Treasury Department was the largest executive branch of the government and had seventy clerks in all, quite a contrast to its present thousands. The present building was completed in 1841. Almost every stranger to the city visits the Treasury to see the girls counting the

money which has been brought, about a million dollars worth at a time, in steel encased wagons, guarded by armed messengers, from the place of its manufacture, the Bureau of Engraving and Printing. The destruction of old, worn-out money and its reduction to pulp in the steel grinders is an interesting sight.

The State, War and Navy Building is the largest building in the world constructed entirely of granite. It cost more than $10,000,000.

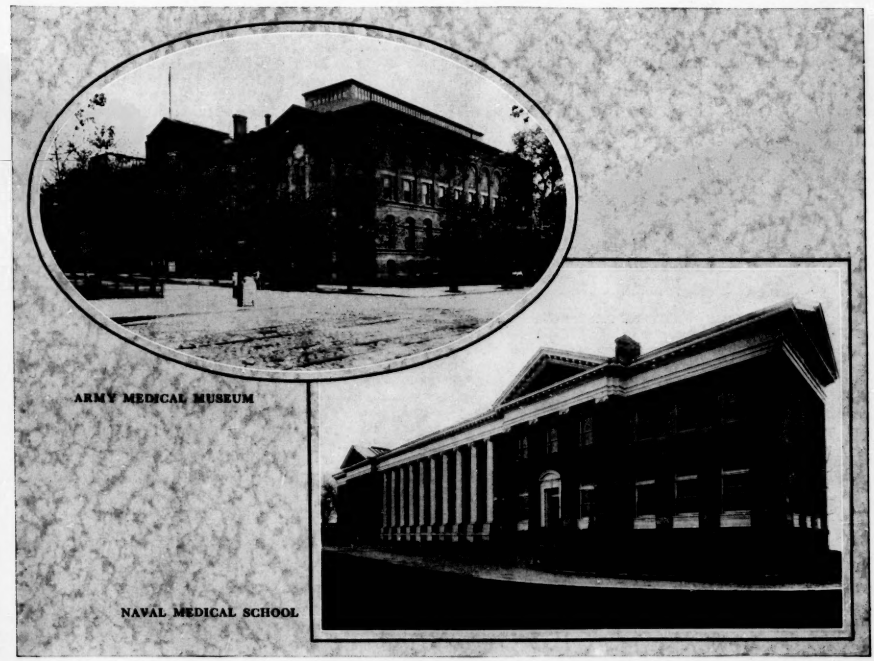
THE WASHINGTON MONUMENT

Looking south over the Ellipse from the south bounds of the White House, a colossal obelisk of marble and granite is seen raising its glistening peak to the skies, the Washington Monument. This shaft is admittedly the greatest piece of masonry in the world. It is a colossal obelisk of mammoth proportions, majestic in its simplicity. It is the loftiest memorial in the world, and the most costly and imposing monument ever erected to man. At the very top is an aluminum pyramid, the point of which is 555 feet from the ground. It is said that a plumb line suspended from the top of the monument inside shows less than three-eighths inch deflection. The weight of the monument is more than 81,000 tons. Its foundation is constructed of solid granite blocks 146 feet square and 36 feet deep. The monument bends a little from the heat of the sun striking its southern side. This deflection is a few hundred thousandths of an inch to the north. High winds are felt by it, rigid and massive as it is, and vibrations of the earth's crust are registered by it. Lightning has struck the monument many times, but it is conducted to the earth through special interior columns provided for the purpose.

The cornerstone was laid in 1848 and, after many vicissitudes, the monument was completed in 1884. Its total cost was about one and a quarter million dollars. A staircase of 900 steps winds its way to the top, which is seldom negotiated except for the purpose of descent. The elevator takes seven minutes to ascend. From the top, a beautiful view may be obtained through the six windows.

THE LINCOLN MEMORIAL

Directly west of the monument, and in full view from the grassy mount on which the memorial to the Father of his Country majestically mounts to the clouds, is another and more recently built memorial to one of the nation's heroes, the martyred President Lincoln. "The Ameican people," said Taft, "waited fifty years for a national memorial to Abraham Lincoln. Visible in its distant beauty from the Capitol, whose great dome typifies the Union which he saved; seen in all its grandeur from Arlington, where lie the nation's honored dead who fell in the conflict, Union and Confederate alike; it marks the restoration of the brotherly love of the two sections in this memorial of one who is as dear to the hearts of the South as to those of the North."



The Lincoln Memorial was under construction for a period of ten years. "The proportions of the memorial are so fine," says Taft, "that its great mass and height and length and breadth are surpassed in its unity." The outside columns are Doric, the inside Corinthian; the colossal figure of Lincoln, in Georgia marble, by French, is overwhelmingly impressive. One of the best of the distant views of the memorial is to be had from the heights of Arlington across the Potomac from the porch of the former home of the illustrious General Robert E. Lee.

MOUNT VERNON AND ARLINGTON

Mount Vernon, the tomb of Washington, is the Mecca of all Americans. The quickest way for visitors to reach it is by the Washington-Virginia Railway.

Arlington National Cemetery, with its new marble amphitheater with a seating capacity of 5,000 people, its mansion, the home of the Lees, its Sylvan Temple, and above all its thousands of graves of known and unknown dead, will be a point of interest likely to attract many of the visitors, their families and friends.

THE CONGRESSIONAL LIBRARY

The Library of Congress, east of the Capitol and facing it, is housed in the largest and most elaborate library building in the world. The building covers nearly 4 acres. The stacks cover more than a hundred miles of shelves. The building was completed in 1897 at a cost of more than $6,000,000. The Library of Congress is the third largest library in the world, being exceeded only by the British Museum, at London, and the Bibliothèque national, at Paris. It contains more than 3,000,000 volumes. The interior decorations are perhaps more elaborate than any other of the many public buildings in Washington, and are well worth seeing.

There are instances of educated people who, on visiting the wonder building for the first time, have shed tears at its beauty; but it remained for "Lo, the poor Indian," to make a really cryptic tribute. Many Indian tribes in full regalia of war paint, blankets and feathers visit the capital, and it is no uncommon sight to see them on Washington streets. A "big chief" in blankets and his picturesque native costume had been shown through the library by some guide. He stood outside looking up at the gold dome. After having viewed it all in silence, he uttered: "Man make it?" That was all, but a real tribute.

Facing along Seventeenth Street on the west side south of Pennsylvania Avenue are several buildings of great beauty and importance. These are the Corcoran Art Gallery, the Red Cross, the Memorial Continental Hall and the Pan-American Union Buildings. Obviously, it will be impossible to describe in detail the beauty of these structures. The Pan-American Union is particularly beautiful, and is by some considered the most remarkably exquisite structure of its size in the world.

To give a list of all the places of interest in Washington where the visiting physicians and their friends might find edification and delight is impossible. The time of the visitor will be necessarily limited and much circumscribed by the scientific program of the meeting. There may be those, however, who might find it particularly useful or pleasant to them to visit certain localities which are not mentioned. Many, of course, will take "Seeing Washington" busses, and in this quick, diverting manner become acquainted with the lay of the land. Other places of interest worth mentioning are the Post Office, Patent Office Buildings, the Bureau of Engraving and Printing, Rock Creek Park and Potomac Park, the Pension Office, the Naval Radio Station, the Department of Justice, the Weather Bureau, the Smithsonian Institution, the National Museum, the Army Medical Museum and Library, the Bureau of Fisheries, the National Academy of Science, the Naval Observatory, the Botanical Gardens, the National Bureau of Standards, the Government Pringing Office, Bolling Airplane Field, Fort Myer, the War College, the District Building, the Public Library, the Carnegie Institute and the house where Lincoln died.

W. M. BARTON, M.D.

TRANSPORTATION

RAILROAD RATES TO WASHINGTON

The passenger associations throughout the United States and Canada have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Washington. To have the benefit of a return rate of one-half fare, it will be necessary for each member to secure a CERTIFICATE from the railroad ticket agent when he purchases his ticket to Washington. The CERTIFICATE must be certified to by the Secretary of the American Medical Association, which may be done at the Registration Bureau, to be located in the Auditorium in Washington, and must then be validated by a representative of the railroads, who will be on duty from 8:30 a. m. to 5:30 p. m., May 16 to 20. When the CERTIFICATE is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Washington, at one-half fare. If the ticket agent at the member's home station does not have the CERTIFICATE, he will furnish information as to where it may be obtained.

The CERTIFICATE is *not* a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure a return trip ticket at a reduced rate. Be sure to ask the ticket agent for a CERTIFICATE.

The dates of sale of tickets to Washington will be May 12 to 18, inclusive, in the territories of the Trunk Line Association, the New England Passenger Association, the Central Passenger Association, the Southeastern Passenger Association and the Eastern Lines of the Canadian Passenger Association. In the territories of the Southwestern Passenger Association, of the Western Passenger Association, of the Transcontinental Passenger Association, and of the Western Lines of the Canadian Passenger Association, the dates of sale of tickets from Arkansas, Illinois and Louisiana and from St. Louis and Hannibal, Mo., and from Keokuk, Iowa, will be May 12 to 18; from Iowa, Kansas, Manitoba, Minnesota, Missouri, Nebraska, northern Michigan, North Dakota, Ontario, South Dakota, Saskatchewan and Wisconsin, and from Julesburg, Colo., May 11 to 17; from Alberta, Colorado, Montana, New Mexico, Oklahoma, Texas, Utah and Wyoming, May 10 to 16, and from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington, May 6 to 12.

CERTIFICATES properly certified and validated will be honored for purchasing tickets for the return journey at one-half fare up to and including May 24, but will not be honored after that date. No refund of fare will be made on account of failure to present validated CERTIFICATE when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Washington. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

When you purchase your ticket to Washington, secure from the railroad ticket agent a CERTIFICATE, which, when properly certified to and validated at the Registration Bureau in the Auditorium at Washington, will entitle you to purchase a return ticket to your home, over the same route traveled to Washington, at one-half the fare paid for your ticket to Washington.

To obtain certification and validation of these CERTIFICATES, you will not be required to go to the railroad station in Washington. The necessary certification by the Secretary of the American Medical Assocation and validation by the representative of the railroads may be secured in the Auditorium in Washington.

BE SURE TO ASK YOUR RAILROAD TICKET AGENT FOR A CERTIFICATE WHEN PURCHASING YOUR TICKET TO WASHINGTON.

SPECIAL TRAINS FROM CHICAGO

The Chicago Medical Society and the Illinois State Medical Society have announced special trains to leave Chicago at 1 p. m., Sunday, May 15, and Monday, May 16. These trains will run over the lines of the Pennsylvania Railroad.

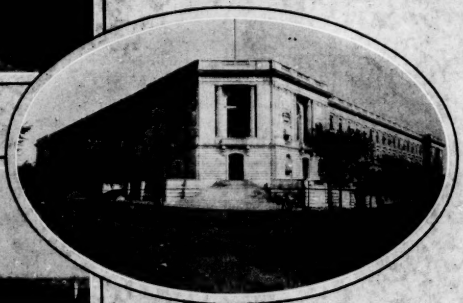
AUTOMOBILE ROUTES

The most important current development in motordom is the extent to which the automobile is being used as a means of travel. Washington has become the natural objective of tourists and offers unusual advantages of a historical and educational nature. Situated centrally on the Atlantic seaboard, concrete highways link the city with all sections of the country.

Well marked and "properly posted" trails guide the tourist through the surrounding countryside. Many members and

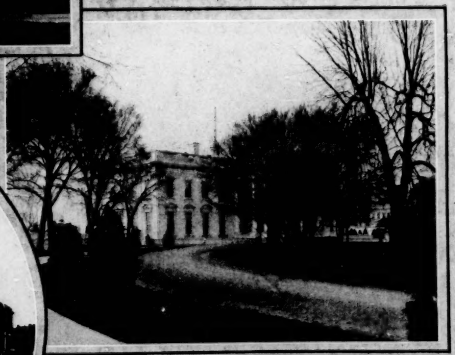
EXECUTIVE OFFICE BLDG.
AT WHITE HOUSE

U. S. CAPITOL

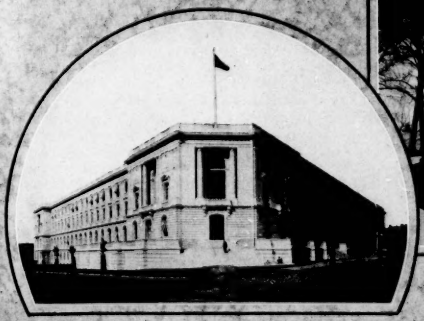


HOUSE OFFICE BLDG.

LIBRARY OF JUSTICE



WHITE HOUSE



SENATE OFFICE BLDG.

their families will, no doubt, avail themselves of improved facilities and motor to the convention city. With this idea in mind, several routes are suggested for the motorist. Detail must of necessity be omitted.

Albany, N. Y., is the natural centralization point for the New England states, thence to the cosmopolitan city of the world, New York; on to Philadelphia, the seat of the first Continental Congress and where many of the original Washington relics may be found in addition to the Liberty Bell and the home of Betsy Ross. This city is rich in the history of the Revolution. Next is Baltimore one of the oldest cities in the country, often referred to as the "Monumental City." Washington is but a brief hour and a half south.

From the West and Middle West, Indianapolis is the logical centralization city, thence to Columbus, Ohio; Wheeling, W. Va.; Hagerstown and Frederick, Md., and Washington. The route is through a rich, historic section of the country, and over mountains unexcelled in the East for their beauty. Gettysburg, where the great emancipator addressed the armies of the Union and where was fought the bloodiest battle of the Civil War, and the battlefields of Antietam are but a few miles away. Frederick is located on ground traversed by the armies of the North and the South, and it is here that the episode told in song and story between General Jackson and Barbara Frietchie was enacted. The motorist on this route passes through fertile farming lands, and through a section where the altitude varies from fifty feet above sea level at Washington to three thousand on some of the mountain tops.

The southern route should begin at Atlanta, Ga., through Columbia, S. C., Raleigh, Petersburg, Richmond, Fredericksburg, Alexandria, and thence into Washington. Vast plantations, where sixty years ago slaves worked in the white fields of cotton, abut the highways. Diversified agricultural activities will offer interest to the tourist. Richmond, the capital of the Confederacy and the place where Gen. Robert E. Lee planned the fight of the South, may be visited en route. For the states of Alabama, Mississippi and Tennessee, members should centralize on Nashville as a pivot. From Nashville to Knoxville, Tenn., Bristol, Va., and thence over the Lee Highway through the Shenandoah Valley, the route offers many advantages. Along this highway is Natural Bridge, Luray Caverns and the famous city of Staunton. Every inch of the valley route has its war story to relate. At the head of the valley lies Harpers Ferry and the winding Potomac River.

For those members of the central states and Kentucky, the route through Cincinnati and then to Columbus, Ohio, to join the route from the midwest is highly desirable.

The advantage of having your car while in Washington cannot be estimated. Within a radius of thirty miles of the city many natural shrines can be visited. Alexandria, Mount Vernon, Annapolis, and other equally historic places may be visited within a few hours.

REGISTRATION

The Bureau of Registration will be located in the Washington Auditorium, New York Avenue, Twentieth and E streets. Members of the Committee on Registration of the Local Committee of Arrangements will be on hand to assist those who desire to register.

A branch postoffice in charge of government postoffice officials will be opened for the convenience of visitors and an information bureau will be operated in connection with the Bureau of Registration.

Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows, and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL, and paid their Fellowship dues for the current year. The annual Fellowship dues provide a subscription to THE JOURNAL for one year. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1927 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street, Chicago.

Members in Good Standing Eligible to Fellowship

Members in good standing in county medical societies are members of state associations and of the American Medical Association. All members in good standing are eligible for Fellowship in the Scientific Assembly, and may qualify as Fellows after reaching Washington; but it will be far better to qualify before leaving home in order that pocket cards may be secured and brought to Washington so that registration can be more easily and more promptly effected. Application forms may be had on request.

Subscribers to THE JOURNAL who have not received pocket cards for 1927 should write to the American Medical Association for application blanks and information as to further requirements

Register Early

Fellows living in Washington, as well as all other Fellows who are in Washington on Monday and Tuesday, should register as early as possible. The names of those who register on the first day will appear in the *Daily Bulletin* the next day, and this will enable visiting physicians to find friends if they have registered.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the *white* registration card, which will be found on the tables in front of the Registration Bureau.

Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the *blue* registration card, and sign the application on the back. These blue cards also will be found on the tables.

Entries on the registration cards should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*.

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out *white* registration card, together with their pocket cards, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in *white* registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

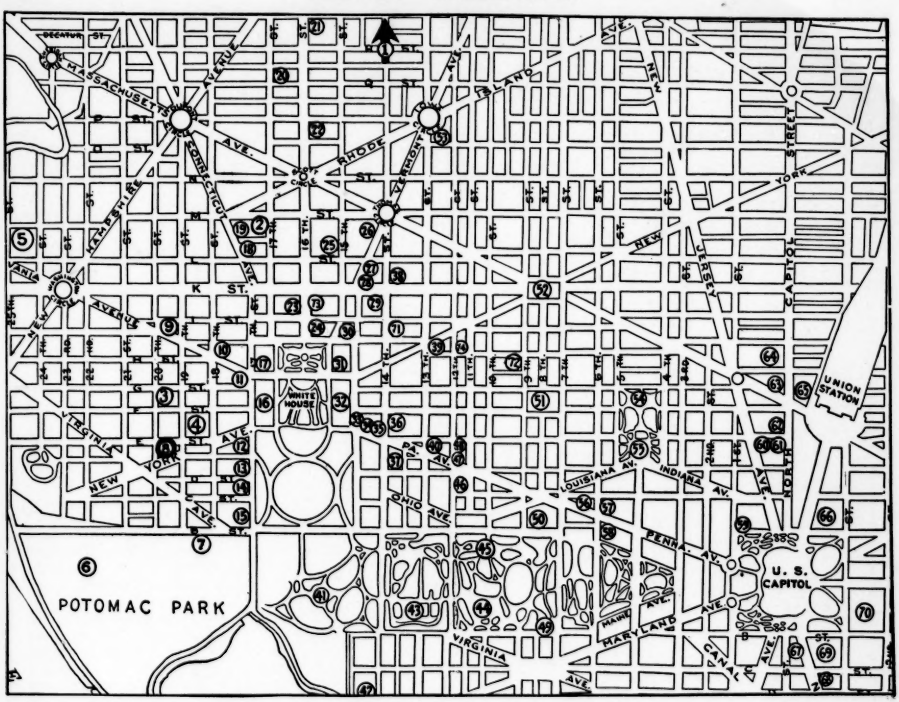
3. The Fellow whose 1927 dues are unpaid should present his filled in *white* registration card with the amount of his Fellowship dues ($5) at one of the windows marked "Cash." Here, too, there will be some delay; but the work of registering will be conducted as promptly as possible.

4. As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than April 28. Any applications received later than April 28 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time so that he can use it in registering at the Washington Session.

As already stated, it will be possible for members of the organization to qualify as Fellows at Washington. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the *blue* registration card

and sign the formal application printed on the reverse side. It is suggested that those who apply for Fellowship at Washington shall provide themselves, before leaving home, with certificates signed by the secretaries of their state associations, attesting that they are members in good standing in state and county branches of the organization. A state membership card for 1927 will be acceptable. The certificate or membership card should be presented along with the filled in *blue* registration card at the window in the registration booth marked "Applicants for Fellowship."

MAP OF WASHINGTON



KEY TO CHART

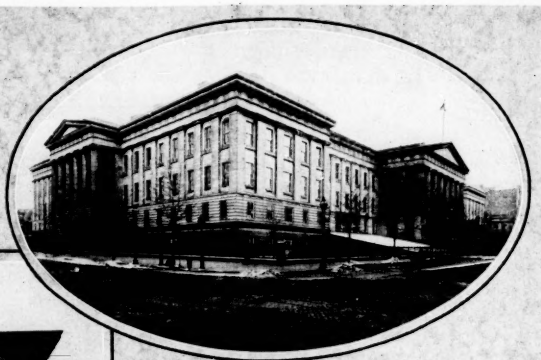
1. Arrow indicates direction to Arcadia Auditorium
2. Home of the Medical Society of the District of Columbia
3. Concordia Church
4. Department of the Interior
5. Weather Bureau
6. Lincoln Memorial
7. Navy Building
8. Auditorium
9. Department of Commerce
10. Powhatan Hotel
11. American Automobile Assn.
12. Corcoran Gallery of Art
13. American Red Cross
14. Memorial Continental Hall (Hall of the Daughters of the American Revolution)
15. Pan-American Union
16. State, War and Navy Building
17. U. S. Court of Claims
18. Mayflower Hotel
19. Grafton Hotel
20. Cairo Hotel
21. Scottish Rite Temple
22. Carnegie Institute
23. Gordon Hotel
24. LaFayette Hotel
25. Lee House
26. The Burlington
27. Medical Science Building
28. Department of Justice
29. Franklin Square Hotel
30. The Shoreham
31. Internal Revenue Bureau
32. U. S. Treasury
33. Washington Hotel
34. Occidental Hotel
35. Willard Hotel
37. District Building
38. Hamilton Hotel
39. Masonic Temple
40. Sterling Hotel
41. Washington Monument
42. Bureau of Engraving & Printing
43. Department of Agriculture
44. Smithsonian Institution
45. National Museum
46. Post Office Department
47. The Raleigh Hotel
48. Harrington Hotel
49. Medical Museum
50. Center Market
51. U. S. Patent Office
52. Carnegie Library
53. Logan Hotel
54. U. S. Pension Office
55. U. S. Court House
56. Metropolitan Hotel
57. National Hotel
58. St. James Hotel
59. Driscoll Hotel
60. Grace Dodge Hotel
61. Continental Hotel
62. Capitol Park Hotel
64. Government Printing Office
65. City Post Office Building
66. Senate Office Building
67. Congress Hall Hotel and Potomac Hotel
69. House Office Building
70. Congressional Library
71. George Washington University Medical School
72. Georgetown University Medical School
73. Carlton Hotel
74. Annapolis Hotel

LOCAL TRANSPORTATION

The Local Committee on Transportation has arranged for bus service, at special rates, for the features on the program and for special trips to points of interest in and around Washington. Flat rates have been arranged for taxicab services from hotels to the Auditorium and to golf courses.

REGISTRATION OF ALUMNI SOCIETIES AND OTHER ORGANIZATIONS

Because of the limited space available in the Washington Auditorium, only one registration booth will be provided for the registration of members of alumni societies and other independent organizations.



U. S. PATENT OFFICE

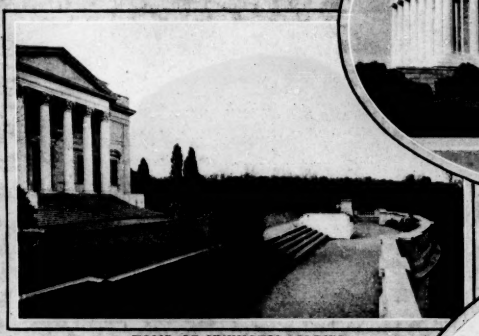
DEPARTMENT OF LABOR

DEPT. OF JUSTICE

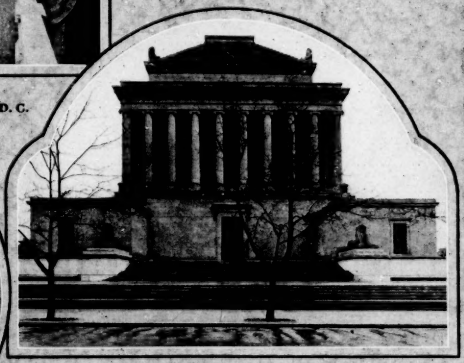
U. S. TREASURY

BUREAU OF PRINTING & ENGRAVING

LINCOLN MEMORIAL



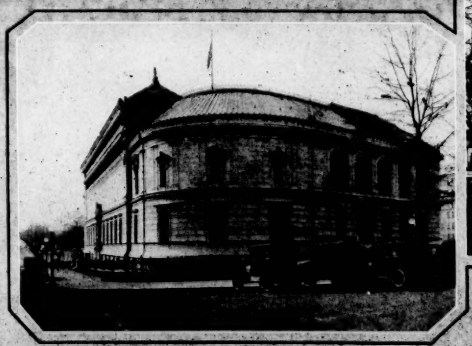
TOMB OF UNKNOWN SOLDIER
AND AMPHITHEATRE
ARLINGTON CEMETERY, WASHINGTON, D. C.



SCOTTISH RITE TEMPLE (NATIONAL)

LAFAYETTE STATUE

MOUNT VERNON



CORCORAN ART GALLERY

WASHINGTON HOTELS

Following is a list of the hotels of Washington. In writing for hotel reservations, state whether a single or double room is desired, whether a room with or without a bath is wanted, and, if possible, the time of expected arrival. Those who intend to go to Washington should make reservations *immediately*. Dr. J. A. Talbot, chairman of the Committee on Hotels, reports that, while there will be ample accommodations, it is desirable that reservations be made at the earliest possible time. Communications concerning hotel reservations should be sent to Dr. J. A. Talbot, Willard Hotel, Washington.

Leading Hotels of Washington

Name and Address	Single		Double		Suite
	Without Bath	With Bath	Without Bath	With Bath	
Annapolis 11th to 12th on H Street	.....	$3.00 -3.50	.....	$4.50 -5.00	.....
Arlington Vermont Ave. at K & 15th streets	.....	$5.00 -6.00	.....	$7.00 -8.00	$8.00-$10.00
Blackstone 1016 Seventeenth Street, N. W.	.....	.....	.....	$3.00 -4.00	..... each person
Burlington 1120 Vermont Avenue	$2.00	$3.50 -4.00	$3.00	$6.00 -8.00	$3.00 and up each person
Cairo 1615 Q Street	$2.00 -2.50	$2.50 -4.00	$3.00 -3.50	$4.00 -6.00	$6.00-$10.00
Capitol Park North Capitol and E streets	$2.50 -3.00	$3.00 -4.00	$4.00 -5.00	$5.00 -7.00	.....
Chastleton Sixteenth Street at R Street	.....	$3.00 -3.50	.....	$4.00 -5.00	$2.00 each person, 4 persons to suite of 2 rooms
Colonial Fifteenth and M streets	$2.00		$3.00-3.50		.....
Congress Hall New Jersey Ave. near Capitol	$2.50	$3.00 -3.50	$4.00	$5.00 -7.00	$7.00
Continental North Capitol, between D and E streets	$2.00 -2.50	$3.00 -4.50	$3.00 -4.00	$5.00 -7.00	.....
De Sales Chambers for Men 1725 De Sales Street	(Quotes a flat rate of $2.50 a man, double and triple.)				
Driscoll 1st and B streets	$1.50 -2.50	$3.50	$3.00 -4.50	$6.00	.....
Ebbitt H Street at Tenth	.....	$3.00	.....	$5.00 -6.00	.....
Everett 1730 H Street, N. W.	$2.00		$4.00		.....
Fairfax Massachusetts Avenue at 21st Street	.....	.....	.....	.....	$4.00-$5.00
Franklin Square 14th and K streets	$2.50	$3.50	$4.00	$5.00 -6.00	.....
Grace Dodge North Capitol and E streets	$2.50 -3.00	$3.00 -4.00	$4.00 -5.00	$5.50 -8.00	$12.00. Each extra person, $1.50
Grafton Connecticut Avenue and De Sales Street	$2.50 -4.00	$3.50 -5.00	$4.00 -6.00	$5.00 -8.00	.....
Hamilton 14th and K streets	.....	$4.00 -7.00	.....	$6.00 -10.00	$20.00
Harrington 11th and E streets	$3.00 and up	$3.50 -4.50	$4.00 -5.00	$5.00 -8.00	.....
Houston 910 E Street, N. W.	.....	$2.50 -3.00	.....	$2.50 each person	.....
LaFayette 16th and I streets	.....	$4.00 -5.00	.....	$6.00 -8.00	$10.00-12.00
Lee House 15th and L streets	.....	$3.50 -6.00	.....	$6.00 -10.00	$12.00
Logan Iowa Circle	$2.00	$3.00	$3.00	$4.00	.....
Martinique 1211 Sixteenth Street	.....	$4.00 -6.00	.....	$6.00 -9.00	$10.00-12.00
Mayflower Connecticut Avenue	.....	$5.00 -12.00	.....	$7.00 -15.00	$18.00-25.00
Meridian Mansions	.....	$3.00	.....	$4.00 -5.00	$7.00-9.00
Metropolitan 615 Pennsylvania Avenue	$2.00	$3.00	$4.00	$6.00 -7.00	.....
National 6th Street and Pennsylvania Avenue	$2.00 -2.50	$3.00 -3.50	$3.00 -3.50	$5.00 -6.00	.....
Occidental Pennsylvania Avenue	.....	.....	.....	.....	$8.00 for 4 persons
Parkside 1336 I Street	.....	.....	.....	.....	$3.00 for 1 person; $5.00-6.00 for 2 persons
Portland Vermont Avenue and 14th Street	.....	.....	$3.50	$4.50	.....
Potomac New Jersey Avenue and C Street, S. E.	$2.00	$3.00	$3.50 and up	$4.50 and up	.....
Powhatan 18th Street and Pennsylvania Avenue	.....	$4.00 -5.00	.....	$6.00 -9.00	$10.00-18.00
Raleigh 12th Street and Pennsylvania Avenue	$3.00 -4.00	$4.00 -6.00	$4.00 -6.00	$5.00 -10.00	$12.00-15.00
Roosevelt 16th and V streets	.....	$4.00 -6.00	.....	$5.00 -8.00	$7.00-10.00
St. James 6th Street and Pennsylvania Avenue	$1.50 -3.00	$3.50	$3.00 -4.50	$5.00 -5.50	$6.00-7.00
Stoneleigh Court Connecticut Avenue and L Street (American Plan)	$6.00 and up	$6.50 and up	$10.00 and up	$10.50 and up	$8.50 and up
Tilden Hall Connecticut Avenue at Tilden		$3.00		$4.00 -5.00	.....
Wardman Park Connecticut Avenue and Woodley Road	.....	$5.00	.....	$8.00	$15.00
Washington 15th Street and Pennsylvania Avenue	.....	$5.00 -8.00	.....	$8.00 -12.00	$20.00-30.00
Willard 14th Street and Pennsylvania Avenue	$3.00 and up	$5.00 -8.00	$5.00 and up	$7.00 -15.00	$18.00-22.00
Winston First Street and Pennsylvania Avenue	$2.00 -2.50	$2.50 -3.00	$3.50 -4.00	$4.50 -5.00	$2.50 and 3.00 each person

GOLFING TOURNAMENT

The Thirteenth Tournament of the American Medical Golfing Association will be held at the Columbia Country Club, Washington, D. C., Monday, May 16. Entries for this tournament will close on May 1. All communications concerning the tournament should be addressed to Mr. John Lorenzo Walter, 1507 Hinman Avenue, Evanston, Ill., until May 1, after which date communications should be addressed to Dr. H. H. Kerr, Chairman of the Subcommittee on Golf of the Local Committee of Arrangements, 1744 N Street, Washington.

The Columbia Country Club boasts of a beautiful and interesting golf course, a real test of golf. Here the open championship was held in 1922. There are many holes which afford numerous chances to use the wooden clubs. The short holes will test the accuracy of the iron shots. The greens in May will be beautiful, and will delight the golfer with their smoothness. The golf tournament will be conducted by Mr. Fred McCleod, the club professional, a golfer of international reputation and a splendid sportsman. There will be seven events. A gorgeous trophy will be awarded the winner of each event. The local committee will give a special prize to the visitor making the best low gross score for eighteen holes, and a useful remembrance to the runner-up. Numerous smaller prizes will be distributed. Following the tournament, a get together party in the form of a golf dinner will be held at the Columbia Country Club.

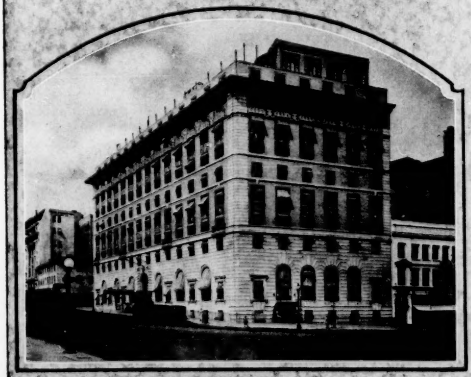
The Chevy Chase Club, the Congressional Country Club, the Washington Country Club, the Columbia Country Club, the Indian Spring Club, the Town and Country Club, the Argyle Club and the Bannockburn Club offer with pleasure the use of their courses to the members of the American Medical Association during the week of the annual session. These clubs are close to Washington and can be reached easily by taxi. After arriving in the city, physicians are invited to call on any one of the members, if there is anything the Golf Committee can do.

POWHATTAN HOTEL

MAYFLOWER HOTEL

WILLARD HOTEL

LAFAYETTE HOTEL



WASHINGTON HOTEL

HAMILTON HOTEL

ENTERTAINMENT

The Subcommittee on Entertainments and the Subcommittee on Ladies' Entertainments of the Local Committee of Arrangements have cooperated in preparing a splendid program. Admission to all entertainments will be by official badge secured at the Registration Bureau at the time of registration.

MONDAY, MAY 16

Between the hours of 9 a. m. and 12 m., ladies are invited to visit the Corcoran Art Gallery, the Pan American Building, the Memorial Continental Hall (D. A. R.) and the Octagon House where the Treaty of Ghent was ratified. Local committees will be on hand to welcome visiting ladies.

Between 1:30 and 2 p. m., wreaths will be placed by officers of the American Medical Association on statues of Benjamin Rush, near the U. S. Naval Hospital; of Samuel Gross, in the Mall near the Army Medical Museum and Library, and of William Crawford Long, in the rotunda of the Capitol; on busts of W. C. Gorgas and Walter Reed, and on a painting of John S. Billings, in the Army Medical Museum. Visiting ladies are invited to attend these ceremonies.

From 1 to 3 p. m., visitors will be welcomed at the Surgeon General's Library and at the Army Medical Museum.

From 2 to 3 p. m., the Walter Reed Hospital will be open to visitors.

At 3 p. m. there will be a pilgrimage to Mount Vernon. Wreaths will be placed on the tomb of George Washington by the President of the American Medical Association, and on the tomb of Martha Washington by the President of the Woman's Auxiliary. Mount Vernon may be reached by boat leaving Seventh Street Wharf at 2 p. m., or by electric cars leaving the station at Twelfth Street and Pennsylvania Avenue, N.W., as well as by sightseeing busses or private automobiles.

The President's yacht, U. S. S. *Mayflower,* and the U. S. Navy Hospital Ship *Relief* will be open to visitors from 2 to 4 p. m. Visitors will be welcomed to the U. S. Navy Hospital Ship *Relief* at these hours each day during the session. The *Mayflower* and the *Relief* will be at the Navy Yard.

From 4 to 5:30 p. m., the United States Marine Band will give a concert at the United States Marine Barracks, and the Navy Band will perform at the Navy Yard.

From 7:30 to 10 p. m., the Congressional Library will be open to visitors, and a committee of local ladies will be on hand to welcome them. This Library may be reached by Lincoln Park cars on Connecticut Avenue, or by Navy Yard cars on Pennsylvania Avenue. The shrine of the Declaration of Independence and the Constitution of the United States are to be found in the Congressional Library.

TUESDAY, MAY 17

The entertainment program for Tuesday provides for a visit to the Washington Monument and to the Bureau of Engraving and Printing at Fourteenth and B streets, S.W., between the hours of 9 and 11 a. m. The Subcommittee on Ladies' Entertainments will have representatives point out places of interest and give visitors information concerning the various departments of the Bureau of Engraving and Printing.

Between 11 a. m., and 12 m., local ladies will meet visitors at the rotunda entrance to the Capitol and conduct a tour of inspection through this building, which, above all others, is interesting to American citizens.

From 10 a. m. to 12 m., St. Elizabeth's, the Government Hospital for the Insane, will welcome visitors.

At 1:30 p. m., the ladies' committee has arranged a visit to Arlington National Cemetery and the old home of General Robert E. Lee. Street cars at Twelfth Street and Pennsylvania Avenue, sightseeing busses or private automobiles may be used for this trip.

At 2:30 p. m., a wreath will be placed on the grave of the Unknown Soldier by the President of the American Medical Association. Major General Summerall, Chief of Staff of the United States Army, will deliver an address at Arlington Amphitheater in tribute to the physicians who lost their lives during the World War. There will be music by the Marine Band and eminent vocal soloists. The invocation will be delivered by the Reverend Dr. Joseph Sizoo.

WEDNESDAY, MAY 18

The president and faculty of Georgetown University will be at home to Fellows and their wives at Georgetown College, Thirty-Seventh and O streets N.W., between the hours of 4:30 and 6 p. m. Georgetown University may be reached by Georgetown cars on F Street or Connecticut Avenue.

At 8:15 p. m., the Woman's Auxiliary to the Medical Society of the District of Columbia and the wives of local physicians will tender a reception at Memorial Continental Hall in honor of Mrs. Wendell C. Phillips, wife of the President of the American Medical Association; Mrs. Jabez North Jackson, wife of the President-Elect; the national officers of the Woman's Auxiliary to the American Medical Association, and all visiting ladies.

THURSDAY, MAY 19

From 9 to 10 a. m. there will be a visit to the New National Museum, and from 10 to 11 a. m. to the Freer Art Gallery, the Smithsonian Institution and the Old National Museum. The Ladies' Entertainment Committee has arranged for a visit to the Old National Museum and to the Phillips Memorial Art Gallery between the hours of 11 a. m., and 12 noon, while the schedule of the Subcommittee on Entertainment provides for a visit to the Phillips Art Gallery between 11:30 a. m., and 12:30 p. m.

From 3:30 p. m., to 4:30 p. m., a visit to the United States Navy Yard and Gun Factory, and inspection of the President's yacht, U. S. S. *Mayflower,* and of the Hospital Ship *Relief* have been arranged.

The President and faculty of George Washington University will be at home to Fellows and their wives at the University between 4:30 and 6 p. m. The University is located at Twenty-First Street between G and H streets, N.W., and may be reached by cars marked F and G streets going west on Pennsylvania Avenue.

At 9 p. m., a reception to the President and Officers of the American Medical Association will be given at the Mayflower Hotel.

Trips by motor to historic Annapolis, to Frederick, to Gettysburg and to other interesting places in Maryland or Virginia may be arranged for on Friday or on Saturday for parties of any number by applying at information booths.

WOMAN'S AUXILIARY

A registration booth for visiting ladies will be open at the Registration Bureau in the Washington Auditorium at 8 a. m., Monday, May 16, and on each day during the session.

The annual meeting of the Woman's Auxiliary of the American Medical Association will be held at the American Red Cross Building, Seventeenth and E streets N.W. at 9:30 a. m., Wednesday, May 18.

At 2 o'clock Wednesday afternoon a Workers' Conference of the Auxiliary will take place at the American Red Cross Building, at which time reports from the states will be heard, and plans for advancement discussed. All visiting ladies are invited to attend these meetings of the Woman's Auxiliary.

At 8:15 Wednesday evening the Woman's Auxiliary of the Medical Society of the District of Columbia and the wives of local physicians will tender a reception at Memorial Continental Hall (D. A. R.) to Mrs. Wendell C. Phillips, wife of the President of the American Medical Association, Mrs. Jabez North Jackson, wife of the President-Elect, and to the officers of the Woman's Auxiliary of the American Medical Association and all visiting ladies.

LUNCHEONS, SMOKERS AND DINNERS

There will be a number of luncheons for the members of various alumni organizations, medical clubs and special societies about the noon hour each day.

There will also be a number of dinners for the members of some of the sections, alumni associations and other organizations on Wednesday evening.

The Association of American Teachers of the Diseases of Children will have a luncheon at the New Willard Hotel at 12:30 p. m., Tuesday, May 17.

The Children's Hospital will give a luncheon to the Section on Diseases of Children at 12:30 p. m., Thursday, May 19.

The Medical Veterans of the World War will have their annual dinner at a time to be announced. Dr. A. T. McCormack, 532 West Main Street, Louisville, Ky., is the secretary.

The officers of Base Hospital No. 114 will have a dinner at the New Willard Hotel at 7 p. m., Thursday, May 19.

The Alumni Society of the Medical Department of the University of Pennsylvania will have a smoker at a time to be announced. Dr. Charles A. Behney, 1308 Medical Arts Building, Philadelphia, is the secretary of this society.

ALPHA OMEGA ALPHA ANNUAL DINNER

On Thursday, May 19, the Alpha Omega Alpha will hold its annual dinner in the Chinese Room of the Mayflower Hotel. A reception will be held at 6 o'clock, with dinner at 6:30. Reservations should be made through the secretary, Dr. W. W. Root, Slaterville Springs, N. Y. An address on "Medical Ethics" will be delivered by Dr. Ray Lyman Wilbur, and discussed by Drs. William Allen Pusey, L. F. Barker, W. D. Haggard and J. N. Jackson.

MEMORIAL EXERCISE AT ARLINGTON

On Tuesday afternoon, May 17, there will be held, at Arlington, a memorial meeting in honor of physicians who lost their lives in the World War. Arrangements are in the hands of a special committee, of which Mrs. Charles W. Richardson is chairman.

MEETING PLACES AND GENERAL HEADQUARTERS

HOUSE OF DELEGATES: Auditorium of the Medical Society of the District of Columbia, 1718 M Street, N. W.

GENERAL MEETING: Arcadia Auditorium, Fourteenth Street and Park Road.

SECTIONS OF SCIENTIFIC ASSEMBLY

PRACTICE OF MEDICINE: Ballroom, Mayflower Hotel, Connecticut Avenue and De Sales Street, N. W.

SURGERY, GENERAL AND ABDOMINAL: Memorial Continental Hall, D. A. R., 300 Seventeenth Street.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Memorial Continental Hall, D. A. R., 300 Seventeenth Street.

OPHTHALMOLOGY: Hall of Nations, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Hall of Nations, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

DISEASES OF CHILDREN: Ballroom, Mayflower Hotel, Connecticut Avenue and De Sales Street, N. W.

PHARMACOLOGY AND THERAPEUTICS: Hall, Willard Hotel, Pennsylvania Avenue and Fourteenth Street, N. W.

PATHOLOGY AND PHYSIOLOGY: Hall, Willard Hotel, Pennsylvania Avenue and Fourteenth Street, N. W.

NERVOUS AND MENTAL DISEASES: Hall, Hotel Raleigh, Twelfth Street and Pennsylvania Avenue, N. W.

DERMATOLOGY AND SYPHILOLOGY: Rose Room, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: Upper Hall, Concordia Church, 1920 G Street, N. W.

UROLOGY: Rose Room, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

ORTHOPEDIC SURGERY: Hall, Hotel Raleigh, Twelfth Street and Pennsylvania Avenue, N. W.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Upper Hall, Concordia Church, 1920 G Street, N. W.

RADIOLOGY: Lower Hall, Concordia Church, 1920 G Street, N. W.

GENERAL HEADQUARTERS, SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, TECHNICAL EXHIBIT, MOTION PICTURE THEATER, INFORMATION BUREAU AND BRANCH POSTOFFICE: Washington Auditorium, New York Avenue, Twentieth and E streets.

DIAGNOSTIC CLINICS

A series of diagnostic clinics, similar to those held at the Chicago, Atlantic City and Dallas sessions, will be held during the Washington Session on Monday and Tuesday, May 16 and 17. The following is a tentative program and is subject to change:

MONDAY, MAY 16, 10 A. M.

MEMORIAL CONTINENTAL HALL

Practice of Medicine.—Diabetes, Elliott P. Joslin, Boston.

GEORGE WASHINGTON UNIVERSITY MEDICAL SCHOOL, HALL NUMBER ONE

Surgery, General and Abdominal.—Lesions of the Colon, F. W. Rankin, Rochester, Minn.

RALEIGH HOTEL—BANQUET HALL

Ophthalmology.—W. H. Wilder, Chicago; J. W. Jervey, Greenville, S. C.; Walter B. Lancaster, Boston.

HALL OF THE DEPARTMENT OF THE INTERIOR

Radiology.—Treatment of Malignant Disease of the Face and Mouth, Douglas A. Quick, New York.

MONDAY, MAY 16, 2 P. M.

CHILDREN'S HOSPITAL

Diseases of Children.—John L. Morse, Boston; Joseph Brennemann, Chicago.

MEMORIAL CONTINENTAL HALL

Gastro-Enterology and Proctology.—Diseases of the Gallbladder, Walter Alvarez, Rochester, Minn.; Diseases of the Colon, F. W. White, Boston.

MONDAY, MAY 16, 2:30 P. M.

GEORGE WASHINGTON UNIVERSITY MEDICAL SCHOOL, HALL NUMBER ONE

Pathology and Physiology.—Diseases of the Heart, Paul D. White, Boston.

RALEIGH HOTEL—BANQUET HALL

Nervous and Mental Diseases.—The Malaria Treatment of General Paralysis, William A. White, Washington, D. C.

HALL OF THE DEPARTMENT OF THE INTERIOR

Preventive and Industrial Medicine and Public Health (clinic under charge of United States Public Health Service).—Tularemia, Edward Francis; Scarlet Fever Tests, Eugene R. Dyer; Skin Sensitization Work, W. T. Harrison; Vaccination, Charles Armstrong or J. P. Leake; Pellagra, Joseph Goldberger; Arsphenamine Work, G. C. Lake.

TUESDAY, MAY 17, 10 A. M.

GEORGE WASHINGTON UNIVERSITY MEDICAL SCHOOL, HALL NUMBER ONE

Obstetrics, Gynecology and Abdominal Surgery.—George G. Ward, New York.

RALEIGH HOTEL—BANQUET HALL

Laryngology, Otology and Rhinology.—L. W. Dean, Iowa City.

MOUNT ALTO VETERNS' HOSPITAL

Dermatology and Syphilology.—George M. MacKee, New York.

HALL OF THE DEPARTMENT OF THE INTERIOR

Urology.—Renal Tuberculosis, Herman Kretschmer, Chicago; Renal Stone, A. L. Chute, Boston.

MEMORIAL CONTINENTAL HALL

Orthopedic Surgery.—A General Orthopedic Clinic, Albert H. Freiberg, Cincinnati.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be on the main floor and stage of the Washington Auditorium; in the same building will also be housed the Technical Exhibits; the Motion Picture Theater will also be located in the spacious gallery of the auditorium. In case of all exhibits, personal demonstrations will be given. Among the exhibits are the following:

SPECIAL EXHIBITS

At the request of the Committee on Scientific Exhibit of the Board of Trustees, there will be three special exhibits. (These exhibits will not be open to awards.)

EXHIBIT ON FRACTURES: The Cooperative Committee on Fractures, representing the Section on Surgery, General and Abdominal, and the Section on Orthopedic Surgery, was appointed to feature fractures by means of (1) an exhibit; (2) motion picture talks, and (3) correlating symposiums. The announcement of the symposiums and the Motion Picture Theater Talks appears elsewhere in this program. In the Scientific Exhibit the following subjects will be illustrated in separate booths: (1) splints and materials for hospitals; (2) splints and materials for the physician's office; (3) splints and materials for the physician's automobile; (4) the preparation and application of plaster bandages; (5) specimens and other material illustrating the process of bone repair; (6) the details of traction and suspension apparatus; (7) illustrations of typical cases of fractures of (*a*) shaft of femur; (*b*) shaft of the humerus, and (*c*) lower radius; (8) cadaver preparations illustrating fractures of the lower end of the radius, and (9) fracture cart for ward use. The presentations have been prepared for the general practitioner of medicine rather than for the surgeon. The Cooperative Committee on Fractures is composed of William Darrach, Nathaniel Allison and Kellogg Speed. This committee has appointed an advisory committee as follows: William S. Baer, Joseph A. Blake, F. J. Cotton, William L. Estes, Sr., M. L. Harris, George W. Hawley, M. S. Henderson, James M. Hitzrot, William L. Keller, Frank R. Ober, Dallas B. Phemister, Emmet Rixford, Charles L. Scudder and William S. O'Neill Sherman. Cooperating with this committee are seventy physicians who will aid in the continuous demonstration, in the various booths.

MORBID ANATOMY EXHIBIT: Fresh pathologic material will be exhibited daily, obtained from hospitals supplemented by some animal material from the slaughter houses and by material from the Department of Agriculture and Hygienic Laboratory at Washington. There will be continuous demonstrations for the entire week, the various committees being divided into groups representing different hospitals, medical schools and government institutions. Besides the human material there will be special animal preparations showing typical pathologic manifestations of vital importance and interest in human medicine. Frozen section technic will be demonstrated from time to time as the interest may require, with limited microscopic projections for those who may care to see the histologic details. The exhibit this year will be under the direction of Dr. Oscar B. Hunter, professor of bacteriology and pathology, George Washington University. The members of the committee are: Thomas Cajigas, professor of pathology, George Washington University; Major George R. Callender, Army Medical Museum; Major James F. Coupal, Army Medical Museum; Marion Dorsett, Bureau of Animal Industry, Department of Agriculture; Walter Freeman, pathologist, Government Hospital for the Insane; Lieut. Comdr. John Harper, Naval Medical School and Hospital; Lieut. Comdr. James E. Houghton, Naval Medical School and Hospital; Janvier W. Lindsay, pathologist, Garfield Memorial Hospital; Herbert Martyn, deputy coroner for the District of Columbia; George W. McCoy, Hygiene Laboratory, U. S. Public Health Service; J. Ramsey Nevitt, coroner for the District of Columbia; Lester Neuman, associate professor of pathology, Georgetown University, Emergency, Georgetown, Providence and Gallinger hospitals; L. H. Prince, United States Veterans' Bureau; E. Clarence Rice, pathologist, Garfield and Children's hospitals; Joseph D. Rogers, deputy coroner for the District of Columbia; Maurice A. Selinger, pathologist, Children's and Episcopal hospitals; Major Charles G. Sinclair, Walter Reed Hospital; Lieut. Comdr. Eben E. Smith, Naval Medical School and Hospital; Harry K. Walters, D.V.S., inspector in charge of Washington meat inspection, U. S. Department of Agriculture; Eugene R. Whitmore, professor of bacteriology and pathology, Georgetown University.

EXHIBIT ON IMMUNOLOGY: The Exhibit on Immunology is a continuation of that authorized for last year. Owing to the large scope of the work, a few of the topics were not shown last year, being deferred for this year's demonstration. The exhibit is under the active charge of H. R. Wahl, professor of pathology of the University of Kansas, with the collaboration of Drs. E. R. Dyer, W. T. Harrison and J. H. White of the United States Public Health Service, Washington, D. C. Various individuals and organizations will also cooperate in supplying material. The exhibit, on the whole, will follow the plan of last year, emphasizing the general application of immunology. There will be booths devoted to the demonstration of the application of toxins, antitoxins, agglutinins, hemolysins, vaccines, etc. Tuberculins, smallpox vaccines, rabies vaccines, and allergins will be included in this exhibit. The UNITED STATES PUBLIC HEALTH SERVICE is also generously preparing a correlating exhibit on smallpox vaccine.

PATHOLOGY AND LABORATORY

ARTHUR J. BEDELL, Albany, N. Y.: Photographs of the living eye. Exhibit of photographs of the orbit; stereoscopic pictures of the interior segment of the eye and of the eyegrounds.

JANET CALDWELL and GEORGE T. CALDWELL, Baylor Hospital, Dallas, Texas: Bacteriophages of sewage filtrate. Exhibit demonstrating the action of lytic principles from filtrates of city sewage on organisms derived from urinary infections. The characteristic phenomena of bacteriophagy will be illustrated by cultures and photographs.

H. J. CORPER, National Jewish Hospital, Denver: Tuberculosis: the application of some laboratory observations. Exhibit of charts and balopticon slides depicting the results of some of the original and more recent staining methods for tubercle bacilli. Results of tests of methods of guinea-pig inoculation for the diagnosis of tuberculosis, the cytomorphosis of tubercle bacilli, the cultivation of tubercle bacilli and the organic reaction to tuberculosis.

BURRILL B. CROHN, New York: Productive forms of ulcerative colitis. Exhibit showing the various forms of polypoid colitis, particularly "loop-form."

O. E. DENNEY, National Leprosarium, United States Public Health Service, Carville, La.: Leprosy: A study in natural color photographs. Exhibit of color plates appropriately displayed.

JOHN A. FOOTE, Children's Hospital, Washington, D. C.: Rickets and other pediatric bone lesions. Exhibit of photographs depicting prehistoric rickets, American Indian and Inca bones. Medieval rickets from primitive paintings; also exhibit showing typical deformities, rachitic atelectasis, rickets and bone syphilis.

WALTER FREEMAN, St. Elizabeth's Hospital, Washington, D. C.: Intermediate development of the nervous system. Exhibit of a new method of silver impregnation of serial paraffin sections which reveal the sharp differentiation in relatively mature tracts in the brain-stem. Mounted photographs and microscopic slides.

F. W. HARTMAN, ADOLPH BOLLIGER and H. P. DOUB, Henry Ford Hospital, Detroit: Experimental cardiorenal studies. Exhibit of heart and kidney lesions as produced in dogs with the deep roentgen ray. Emphasis is given to the cardiovascular changes illustrated with charts; blood pressure tracings, electrocardiograms, photographs, photomicrographs and anatomic specimens.

CHEVALIER JACKSON, Philadelphia: Prophylaxis of foreign body and lye accidents. Exhibit showing what the baby puts in his mouth and charts showing the methods of preventing household accidents to children.

W. M. JAMES, L. B. BATES, L. GETZ and J. J. VALLARINO, Medical Association of the Isthmian Canal Zone from the Ancon, Santa Tomas, and Panama hospitals: Diagnosis and pathology of infection with *E. histolytica*. Exhibit of (1) specimens of *E. histolytica, E. coli, I. buetschlii, E. nana* and *D. fragilia*, showing various phases of the life cycle; (2) sections of tissue showing pathology of *E. histolytica* infection; (3) gross pathology of *E. histolytica* infection; (4) roentgenograms showing defects in large intestine due to *E. histolytica* infection; (5) specimens showing other intestinal protozoa. The more important points to be illustrated are (*a*) the appearance of the intestinal amebae in preparations from the stool; (*b*) the microscopic and gross pathology of the lesions; (*c*) that intestinal amebiasis due to *E. histolytica* infection is nearly always confined to the large intestine and rarely invades other organs and tissues; (*d*) and the necessity for prolonged treatment to cure the lesions.

B. S. KLINE and A. M. YOUNG, Mount Sinai Hospital, Cleveland: Immediate microscopic slide precipitate test for syphilis. Repeated demonstrations of the method. (*a*) Exhibit of charts showing the results of this test with clinical and serologic comparisons. (*b*) Exhibit showing the comparative points of the Wassermann, Kahn and various other tests for syphilis.

PAUL E. LINEBACK, Emory University School of Medicine, Atlanta, Ga.: Teniae of Colon. Exhibit illustrating the development, nature and suggested function of the teniae.

HELEN LORRAINE, St. Elizabeth's Hospital, Richmond, Va.: Pathologic reproductions. Exhibit of drawings of gross pathologic specimens and of surgical technic.

OSWALD T. LOWSLEY, New York Hospital, New York: Tuberculosis of the kidney. Exhibit of gross specimens, also roentgen-ray films of various types of tuberculosis; pyelographic pictures of various types.

MAYO CLINIC and MAYO FOUNDATION GROUP, Rochester, Minn.: E. H. HARGIS and B. H. HAGER: Congenital and acquired lesions of the upper urinary tract. Exhibit of a collection of surgical and autopsy material depicting various lesions of the upper urinary tract. The specimens have been mounted in vacuum and are examples of pyelonephritis, tuberculosis, lithiasis, hydronephrosis, neoplasm, polycystic and simple cysts, and congenital anomalies. The surgical specimens are supplemented with a short abstract of the clinical history together with urograms in those cases in which urography was carried out. Photomicrographs accompany many of the neoplasms. WILLIAM C. MACCARTHY: Cancer cells. Exhibit of photographs showing malignant cells and some of their morphologic characteristics as seen in living and fresh unfixed tissues with the oil lens. Also cells that might be confused with them. Chart showing that neoplasmata are now seen as smaller lesions, the result of education of the public. This necessitates more refined methods of diagnosis and makes surgical exploration and biopsy more frequent clinical diagnostic and prognostic procedures. G. B. NEW and F. A. FIGI: Tumors of the jaw and face. Exhibit presenting a series of photographs of patients with various types of benign, malignant and inflammatory tumors of the jaws and face, the condition before and after treatment being shown in most cases. Roentgenograms of some of these different tumors together with photomicrographs detailing their histologic structure are also to be presented. A. H. MCINDOE and V. S. COUNSELLER: Pathologic conditions of the liver, demonstrated by corrosion specimens. The effect of portal cirrhosis on the liver parenchyma as shown by wax-plate reconstruction; its effect on the intrahepatic bile ducts and blood vessels as shown by gelatin and celloidin corrosion specimens. A consideration of the effects of the process on the extrahepatic vascular system.

HIDEYO NOGUCHI, Rockefeller Institute for Medical Research, New York: Etiology of Carrion's disease. (Oroya fever, verruga peruana) *Bartonella muris* in splenectomized rats. Exhibit of charts showing (*a*) lesions induced in *Macacus rhesus* and anthropoid apes by inoculation of *Bartonella bacilliformis* cultivated from blood or skin lesions of Oroya fever or verruga peruana; appearance of the micro-organism in blood and tissues and in culture. (*b*) Charts showing appearance of *Bartonella muris* in splenectomized rats. Also an exhibit on trachoma.

CHARLES PHILLIPS, Department of Pathology, Medical College of Virginia, Richmond. The pathology of tumors. Demonstration of typical tumors originating in most of the organ systems of the body, including a subgroup of brain tumors.

NATHAN ROSENTHAL, New York: Blood pictures, normal and abnormal. Exhibit of autochrome lumière plates showing various types of leukocytes both normal (polymorphonuclear neutrophil, etc., lymphocytes and monocytes) and abnormal, such as lymphoblasts, myeloblasts, myelogones, plasma cells and macrophages; also blood pictures of leukemias and anemias.

ERNEST SCOTT and R. A. MOORE, Ohio State University, Columbus: Pathology of the kidney. Exhibit of pathologic kidneys suitable for teaching purposes, vascular changes being shown by means of celloidin injections.

BENJAMIN TAYLOR TERRY, Nashville, Tenn.: A new rapid microscopic method for determining tissue malignancy. Exhibit with demonstrations of a new stain and new principle in tissue microscopy.

UNITED STATES PUBLIC HEALTH SERVICE, Washington, D. C.: Smallpox and vaccination. This exhibit has been kindly arranged as correlating the exhibit on Immunology. There will be various demonstrations of the pressure-prick method of vaccination and charts showing the various reactions following vaccination. A series of vaccination models will also be shown. The test for immunity to smallpox will be made on all physicians who apply at noon and at 4 p. m. on Tuesday and Wednesday of the week of the annual session.

F. B. YOUNG and A. L. COOPER, Scottsbluff, Neb.: Ancient pathologic conditions; paleopathology. Exhibit of specimens of ancient pathologic conditions, some of which are fossil and some otherwise preserved, with normal ancient and pathologic modern material for comparison. A series of roentgen-ray films of those conditions suitable for comparative study. Photographs of animals and conditions from early geological times to the present in specimens and series.

MEDICAL, SURGICAL AND ROENTGENOLOGIC EXHIBITS

VILRAY P. BLAIR, St. Louis: Problem of bringing forward the retracted upper lip and nose. Exhibit of casts that have been treated with wax and colored, photographs and drawings.

J. S. HORSLEY, JR., St. Elizabeth's Hospital, Richmond, Va.: Plastic surgery. Exhibit of photographs and drawings of unusual plastic cases before and after operation; drawings depicting types of operations and operative methods and technic.

HERMAN L. KRETSCHMER and K. E. BARBER, Rush Medical College, University of Chicago, Chicago: Changes in the bladder following wide resection. Exhibit showing changes in the bladder following wide resection for such lesions as carcinoma and elusive ulcers; experimental study carried out on rabbits and dogs after resecting various amounts of bladders. Pyelograms before and after operation.

RADIOLOGIC

KENNON DUNHAM, University of Cincinnati, Medical Department, Cincinnati: Anatomy and tuberculosis of lungs. Exhibit of roentgenograms suggesting necessary treatment of the lungs; iodized oil injection and roentgen-ray records demonstrating various tuberculosis lesions.

PRESTON M. HICKEY, University of Michigan Hospital, Ann Arbor, Mich: Roentgen-ray studies of the larynx. Prints of development of the larynx and prints of roentgen-ray films of pathologic larynges.

SAMUEL IGLAUER, Cincinnati: Roentgenograms of lungs injected with iodized oil. Exhibit demonstrating several methods of injecting the tracheobronchial tree with iodized oil; also exhibit of roentgen-ray films showing various lesions of the larynx, trachea, bronchi, lungs and pleural cavity after being filled with the "opaque" oil.

W. D. JAMES, Hamlet, N. C.: Epithelioma. Exhibit demonstrating the use of radium, roentgen ray and electrodesiccation in the treatment of epithelioma. Exhibit of slides, charts and pictures.

M. A. MORTENSEN, STUART PRITCHARD and W. O. UPSON, Battle Creek Sanitarium, Battle Creek, Mich.: Roentgenologic

exhibit of cardiac, pulmonary and gastric lesions. Exhibit of photographs of enlarged and tortuous aortas; also reliefs on stomachs.

BERNARD H. NICHOLS, Cleveland, Clinic, Cleveland: Roentgenologic studies of the aorta. Exhibit of plates or roentgen-ray films and wax models illustrating the possible normal and abnormal positions of the aorta.

SECTION EXHIBITS

SECTION ON DERMATOLOGY AND SYPHILOLOGY

The exhibit under the auspices of the Section on Dermatology and Syphilology will cover two topics—Fungus Diseases, and Dermatologic Quackery. The former will consist of numerous photographs illustrating the various clinical appearances of fungus diseases, together with specimens and charts showing the bacteriology, pathology and treatment of the diseases. The exhibit on Dermatologic Quackery will include such topics as paraffin injections, face lifting and roentgen-ray treatment of hirsuties. The committee in charge is composed of F. J. Eichenlaub, Washington, D. C.; Clark W. Finnerud, Chicago, and Fred D. Weidman, Philadelphia, chairman.

FLORENCE E. AHLFELDT, University Hospital, Philadelphia: Studies in Coccidioidal Granuloma. Pathogenesis, bionomics and therapeutics. Exhibit of: 1. Morbid anatomy: (*a*) a series of animals with skin lesions; (*b*) museum jars showing lesions; (*c*) microscopic slides, and (*d*) cultures. 2. Pathogenesis: (*a*) animals that breathed contaminative air; (*b*) animals that ate contaminative food, and (*c*) animals that received 25 mg. of culture. 3. Bionomics: (*a*) morphology of fungus on different mediums; (*b*) comparison of culture to blastomycosis; and (*c*) fungostatic and fungicidal tests. 4. Therapeutics.

D. J. DAVIS, Pathology and Dermatology Departments, University of Illinois, Chicago: Systemic fungus diseases. Exhibit of photographs and specimens, gross and microscopic, and cultures of torula infections. Coccidioidal granuloma; also sporotrichosis, actinomycosis, nocardiosis, streptothrix, etc.

HOWARD FOX, New York: Common fungus diseases of the skin. Exhibit of cultures of various dermatophytes; also photographic exhibition showing cultures in flasks and petri dishes; photographs of direct microscopic preparations and hanging drop cultures.

ANDREW L. GLAZE and V. C. BROGDON, Birmingham: Ringworm of the hands and feet. Exhibit showing incidence, types of fungi occurring in seventy identified cultures and methods of treatment, illustrated by photographs showing stages; also exhibit of skin tests showing the practicability of mass exfoliation.

J. G. HOPKINS and R. BENHAM, College of Physicians and Surgeons, New York: Fungus diseases of the skin and its appendages. Exhibit of photographs of lesions and of cultures isolated from them; also flask cultures of fungi and their microscopic preparations.

G. M. MACKEE and FRED WISE, New York: Lichen Planus and Pityriasis Rosea. Exhibit of photographs showing unusual clinical manifestations.

AZELIO MARCHI, Libreria Editrice Senese, Siena, Italy: Miceti patogeni (pathogenic mycetes). Exhibit of seven volumes of micropathology illustrated and accompanied with the original specimens mounted on slides for microscopic examination. Pollacci-Nannizzi: I Miceti Patogeni all'uomo e agli animali; Perin: Micosi polmonari; Bolognesi-Chiurco: Micosi chirurgichi.

DUDLEY C. SMITH, University of Virginia, Charlottesville, Va.: Systemic blastomycosis. Exhibit of hospital records, photographs, bacteriologic reports with specimens (gross and microscopic); also autopsy protocols with specimens.

MICHAEL G. WOHL and SANFORD GIFFORD, Omaha: Fungus diseases of man in the state of Nebraska. Exhibit of photographs illustrating cases of sporo-trichosis, blastomycosis, actinomycosis and aspergillus with cultures and microscopic slides of some of them; also tissues of blastomycosis and aspergillus.

ERWIN P. ZEISLER, Chicago: Monilia infection of the tongue. Exhibit of colored drawings of tongue lesions and photomicrographs of experimental kidney lesions; also cultures.

SECTION ON UROLOGY

At the Dallas Session, the Section on Urology authorized a special committee to undertake an exhibit on Gonorrhea in the Male. Cooperating with this committee is the American Social Hygiene Association. The scope of the exhibit is described below. The committee appointed by the section consists of Francis R. Hagner, Washington, D. C., chairman; E. L. Keyes, New York, and Alexander Randall, Philadelphia. Walter M. Brunet represents the American Social Hygiene Association and is secretary of the committee.

AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: Public health aspects of venereal disease control. Exhibit of placards, posters, charts, drawings and other display material illustrating public health measures directed toward the control of the venereal diseases.

WILLIAM T. BELFIELD and H. C. ROLNICK, University of Chicago and Northwestern University, Chicago: Infections of seminal ducts. Anatomy and therapy. Exhibit of roentgenograms of injected ducts and of their sheaths; also photographs of structure, gross and microscopic.

WILLIAM BIERMAN, New York: Physicaltherapy—diathermy in the treatment of gonorrhea in the male. Exhibit showing application of diathermy in the treatment of gonorrhea.

CLYDE W. COLLINGS, Bellevue Hospital, New York: Gonococcus infection of the urethra, prostate, epididymis and joints. Exhibit of drawings and charts showing the treatment of anterior and posterior urethritis and prostatitis; also drawings of adhesive suspensory treatment of epididymitis and pictures of the cast treatment of arthritis.

DIVISION OF VENEREAL DISEASES, United States Public Health Service, Washington, D. C.: Venereal disease control activities of the United States Public Health Service. Exhibit of framed placards showing the activities and accomplishments of the United States Public Health Service in venereal disease control; also automatic strip film projector showing lesions of syphilis.

FRANK R. HAGNER, Washington, D. C.: Complications of gonorrhea in the male. Operations for sterility. Exhibit showing the technic for sterility following bilateral epididymitis; pathology of epididymitis and manner of abscess formation.

EDWARD L. KEYES, Cornell University, New York: Surgical pathology of gonorrhea in the male. Exhibit of placards, posters, drawings and charts and other illustrative material depicting the invasion of the urethra and the extension of the infection to the prostate, vas, seminal vesicles, etc.

P. S. PELOUZE and FREDERICK S. SCHOFIELD, Department of Urology, University of Pennsylvania, Philadelphia: Bacteriology and clinical course of gonorrhea. Exhibit of charts, cultures, etc., showing the various phases of bacteriology and graph charting of urina trends in the various types of gonorrhea, and the deductions to be drawn therefrom.

ABRAHAM L. WOLBARST, New York: Wax models showing pathology of verumontanum and posterior urethra in chronic gonorrhea. Exhibit of hand-made wax models showing pathology of urethra as seen through cysto-urethroscope.

HUGH H. YOUNG, Johns Hopkins University, Baltimore: Exhibit showing results of recent work, particularly with the newer antiseptics, in the treatment of gonorrhea in the male.

GOVERNMENT AND EDUCATIONAL

BUREAU OF CENSUS, U. S. DEPARTMENT OF COMMERCE, Washington, D. C.: Exhibit of vital statistic graphs showing change in death rates for all forms of tuberculosis, cancer, diabetes, typhoid and automobiles; also a map detailing the birth and death registration areas.

BUREAU OF ENTOMOLOGY, UNITED STATES DEPARTMENT OF AGRICULTURE, Washington, D. C.: Insects as carriers of diseases of man. Exhibit of bromide enlargements of carriers and diseases produced by them. Jars of insecticides and panels showing living insect carriers.

BUREAU OF MINES, U. S. DEPARTMENT OF COMMERCE, Washington, D. C., and Pittsburgh: Effects of composition of air and atmospheric changes and pressure. Exhibit illustrating effects of oxygen on animals; the effects of poisonous gases, as carbon monoxide; and the methods of resuscitation of animals.

CHILDREN'S BUREAU, U. S. DEPARTMENT OF LABOR, Washington, D. C.: Maternity and child hygiene. Statistical charts based on a study of posture in the public schools of Chelsea. Charts showing trend of infant and maternal mortality rates; posters showing various stages of sun baths for babies and exhibit showing the posture exercises.

U. S. DEPARTMENT OF AGRICULTURE, Washington, D. C.: Exhibit on tuberculosis eradication in cattle; live stock quarantine service; protecting consumers of meat; signs of good and poor nutrition; family diet; fraudulent remedies, etc.

U. S. PUBLIC HEALTH SERVICE: See Pathology and Laboratory.

MEDICAL DEPARTMENT OF THE NAVY, Washington, D. C.: Exhibit illustrating the activities of the Naval Medical School; hospital corps training schools, naval hospitals, dispensaries, etc., and of medical department afloat and with marines. Also interesting specimens from the Naval Medical School. (See also Auxiliary Exhibits.)

MEDICAL DEPARTMENT OF THE ARMY: See Auxiliary Exhibits.

VETERANS' BUREAU, Washington, D. C.: The exhibit of the Veterans' Bureau will be made up from units from several hospitals as follows:

U. S. VETERANS' HOSPITAL, Alexandria, La.: Roentgenograms and photographs showing impaction of bran in the gastro-intestinal canal. From a roentgenologic standpoint, these cases simulate gastro-intestinal diseases.

U. S. VETERANS' HOSPITAL, Bronx, New York: Five specimens showing various types of glioma of the brain.

U. S. VETERANS' HOSPITAL, Augusta, Ga.: Charts illustrating the statistical data accumulated in a study of erythrocyte sedimentation rate in the various psychoses.

U. S. VETERANS' HOSPITAL, Camp Custer, Mich.: Comparison of the Kahn and Kolmer tests in syphilis, based on paper by C. E. Roderick, consulting pathologist.

EDWARD HINES, JR., HOSPITAL, Maywood, Ill.: 1. Chart illustrating deflation of the pleural cavity in the treatment of spontaneous pneumothorax. 2. Chart illustrating Kahn test on spinal fluid.

U. S. VETERANS' HOSPITAL, Minneapolis: Photographs of lesions of Hodgkin's sarcoma.

U. S. VETERANS' HOSPITAL, Oteen, N. C.: Observations on Intestinal Tuberculosis, based on paper by Alfred Blumberg. Exhibit of (1) specimens showing interesting lesions of intestinal tuberculosis; (2) roentgenograms showing absorption of pulmonary tuberculous exudates; (3) roentgenograms showing disappearance of cavities in pulmonary tuberculosis.

U. S. VETERANS' HOSPITAL, Palo Alto, Calif., and U. S. VETERANS' BUREAU PATHOLOGICAL UNIT, Washington, D. C.: Budding in Ameba, based on paper by T. H. T. Wight and L. H. Prince. Exhibit of mounted photomicrographs to show the various phenomena alleged to occur in councilmania lefleuri are artificially produced.

U. S. VETERANS' HOSPITAL, Sunmount, N. Y.: Photographs showing the development of tuberculosis in the human body: (*a*) primary complex, gross and microscopic; (*b*) apical tuberculosis (I) active (II) healed—semigross; (*c*) bronchogenic tuberculosis (I) exudative (II) proliferative; (*d*) Pneumonic tuberculosis (I) acute (II) chronic; (*e*) cavity formation; (*f*) miliary tuberculosis; (*g*) intestinal tuberculosis; (*h*) renal tuberculosis, (I) early, (II) moderately advanced; (III) late.

U. S. VETERANS' HOSPITAL, Waukesha, Wis.: Exhibit dealing with (1) hyperplastic thymus resulting in postoperative sudden death; (2) posterior aspect of the trachea and both main bronchi; (3) diffuse infiltrating medullary carcinoma of three fourths of the stomach; (4) Mounted photomicrographs of brain tissue showing the characteristic lesions of acute epidemic encephalitis lethargica.

U. S. VETERANS' HOSPITAL, West Roxbury, Mass.: Chart showing graphs of weights, temperatures and photographs of patients with neurosyphilis under treatment with rat-bite fever.

U. S. VETERANS' HOSPITAL, Diagnostic Clinic, Washington, D. C.: 1. Exhibit showing the medical administrative procedures at the Diagnostic Clinic: (*a*) reporting of cases; (*b*) cross-index of diagnoses; (*c*) compiling of monthly and annual medical reports. 2. Prints of interesting roentgen-ray films.

MEDICAL SERVICE, Central Office, Washington, D. C.: 1. Chart showing clinical and laboratory results of malarial treatment of neurosyphilis. 2. Chart giving statistical data on cardiovascular diseases. 3. Chart showing hospital library statistics.

AMERICAN ASSOCIATION FOR MEDICAL PROGRESS, New York: Experimental science and medical progress. Exhibit of charts and publications showing the work of the American Association for Medical Progress.

AMERICAN FEDERATION OF ORGANIZATIONS FOR THE HARD OF HEARING, New York: Exhibit showing the work of the American Federation of Organizations for the Hard of Hearing. Charts, posters and literature bearing on the work for the deafened.

AMERICAN HEART ASSOCIATION, New York: Exhibit of charts, descriptive of the preventive problems, value of organized care, educational facilities and development dealing with heart disease as a public health problem.

AMERICAN LIBRARY ASSOCIATION, Chicago: Hospital Library Service. Exhibit of photographs and charts; also specimens of hospital book truck and literature in reference to hospital library service.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER, New York: Prevention of cancer. Exhibit of panels, charts, statistics and diagrams dealing with this subject.

LOUIS I. DUBLIN, Metropolitan Life Insurance Company, New York: Public health progress in recent years. Exhibit showing (1) alcoholism mortality, before and after prohibition; (2) sickness survey in Montreal; (3) incidence of and mortality for measles; (4) mortality from diabetes before and since the discovery of insulin.

INSTRUCTIVE VISITING NURSES SOCIETY, Washington, D. C.: Visiting nurse service. Exhibit of pamphlets, charts, set-ups, models, etc., detailing the Visiting Nurses services in Washington, D. C.

NATIONAL BOARD OF MEDICAL EXAMINERS, Philadelphia: Exhibit of charts and other material describing the work and progress of the National Board of Medical Examiners.

PLAYGROUND AND RECREATION ASSOCIATION OF AMERICA, Chicago: Community recreation. Exhibit of photographs, charts, posters and printed matter.

U. S. PHARMACOPEIAL CONVENTION, Philadelphia: The Pharmacopeia of the United States. Exhibit showing the control work of the Hygienic Laboratory (U. S. P. H. S.) on U. S. P. biologics; also exhibit of other material bearing on the selection of U. S. P. products.

AMERICAN MEDICAL ASSOCIATION

COUNCIL ON PHARMACY AND CHEMISTRY: Posters and specimens illustrating the efforts of the Council in the interests of scientific medicine and rational prescribing.

AMERICAN MEDICAL ASSOCIATION CHEMICAL LABORATORY: Posters and specimens bearing on such subjects as newer synthetics, comparative prices of proprietary and nonproprietary remedies and drug control.

BUREAU OF INVESTIGATION: Exhibit of: (1) a series of educational posters; (2) specimens of pamphlets published for the purpose of furnishing information easily and quickly to the public, and (3) the volumes of "Nostrums and Quackery."

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS: 1. Reliable information about medical education, licensure, reciprocity, hospitals, postgraduate courses and accredited internships. 2. Display of colored maps locating the hospitals in each county and town in the United States. 3. Pamphlet publications and statistical data on medical education, hospitals and nurse training schools.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION: Exhibit of (1) charts and posters on health education series, of infant welfare series and some of the prize posters of the HYGEIA contest; (2) charts and pamphlets showing cooperative work of National Education Association and the bureau; (3) "Manual of Suggestions for the Conduct of Periodic Health Examinations" and the blanks prepared by the bureau for conduct of the examinations, to which particular attention will be called.

BUREAU OF LEGAL MEDICINE AND LEGISLATION: Exhibit of posters showing the general scope of activities of the bureau, specimen inquiries answered by the bureau, and the result of efforts to secure a lower tax for physicians under the Harrison Narcotic Act; maps outlining the extent and results of the medical defense activities of the constituent associations in 1924, and a map showing the states that have enacted laws regulating the sale of lye and other caustic substances in packages suitable for household use.

AMERICAN MEDICAL ASSOCIATION LIBRARY: Graphic demonstration by charts and posters of the various services rendered by the library to the individual physician and to the field of current medical literature. Exhibit of material illustrating the reference and bibliographic service, package library service, periodical lending service, indexing, etc.

AUXILIARY EXHIBITS

MEDICAL DEPARTMENT, UNITED STATES ARMY

The Medical Department of the Army has arranged for an Army Field Hospital Exhibit. This will be the most extensive and the most complete of its type ever held. It will be manned by 168 men and officers and located on the mall in front of the White House. The visiting physicians have been cordially invited by the Army to inspect this unusual outlay.

MEDICAL DEPARTMENT, UNITED STATES NAVY, Washington, D. C.: The Secretary of Navy has definitely ordered the Hospital Ship *Relief* to be located in Washington at the United States Navy Yards from May 15 until May 20, during which time it will be open to inspection to visiting physicians attending the annual session.

MOTION PICTURE THEATER

The Motion Picture Theater will be located in the large balcony of the Washington Auditorium immediately above the Scientific Exhibit. It will accommodate between fifteen hundred and two thousand persons. The theater will open at noon on Monday and will run continuously each day thereafter from 9 a. m. to 6 p. m. and until noon on Friday. Each speaker will demonstrate the talk with either lantern slides or motion pictures.

WALTER C. ALVAREZ, Rochester, Minn.: Peristalsis. Illustrated with motion pictures and lantern slides.

FREDERIC BANCROFT, New York: Repair of Fractures. Illustrated with lantern slides.

DANIEL H. BESSESEN, Minneapolis: Further Studies in Etiology and Prevention of Puerperal Infection. Illustrated with motion pictures.

WILLIS CAMPBELL, Memphis: Reduction of Fractures of the Femur. Illustrated with lantern slides.

CHILDREN'S BUREAU, Washington, D. C.: (1) Posture; (2) Sun-Babies. Motion picture films.

HENRY A. CHRISTIAN, Boston: Treatment of Marked Degrees of Cardiac Edema. Illustrated with lantern slides.

D. J. DAVIS, Chicago: Systemic Fungus Infections. Illustrated with lantern slides.

J. B. DE LEE, Chicago: Refinement of Laparotracheotomy. Illustrated with lantern slides.

FRANK DICKSON, Kansas City, Mo.: Nonoperative Treatment of Fractures. Illustrated with motion pictures.

DANIEL N. EISENDRATH, Chicago: Interpretation of Pyuria. Illustrated with lantern slides.

S. P. GOODHART and EDGAR OPPENHEIMER, New York: (1) Plastic Casts in Dystonia Musculorum; (2) Relation of the Functional or Psychogenic to the Organic.

HERMAN GOODMAN, New York: Principles of Therapy with "Light" Radiation. Illustrated with lantern slides.

M. L. GRAVES, Houston, Texas: Overweight and Early Myocardial Insufficiency. Illustrated with lantern slides.

CLIFFORD G. GRULEE, Chicago: Infant Feeding. Illustrated with lantern slides.

W. D. HAGGARD, Nashville: Diagnosis of Clinical Types of Goiter and Their Medical and Surgical Treatment. Illustrated with lantern slides.

EDMUND JACOBSON, Chicago: New Physiologic Study and Management of Nervous and Exhausted States. Illustrated with lantern slides.

CHEVALIER JACKSON, Philadelphia: What Does Your Baby Put in His Mouth? Illustrated with motion pictures and lantern slides.

W. D. JAMES, Hamlet, N. C.: Epitheliomata: Prophylactic and Curative Methods. Illustrated with motion pictures and lantern slides.

WILLIAM M. JAMES, Canal Zone Medical Society, Panama, R. P.: Pathology of Infection Due to E. Histolytica. Illustrated with lantern slides.

L. F. KEBLER, U. S. Bureau of Chemistry and Post Office Department, Washington, D. C.: Using the Mails to Defraud. Illustrated with lantern slides.

J. P. LEAKE, U. S. Public Health Service, Washington, D. C.: Smallpox and Vaccination. Illustrated with lantern slides.

HENRY A. MARBLE, Boston: Early Mobilization in the Treatment of Fractures. Illustrated with motion pictures.

LELAND S. MCKITTRICK, Boston: Diabetic Gangrene: Its Mechanism and Treatment. Illustrated with lantern slides.

THOMAS PARRAN, Washington, D. C.: Venereal Disease in Preventive Medicine. Illustrated with lantern slides.

G. ALLEN ROBINSON, New York: Radium Therapy. Illustrated with motion pictures.

A. M. SNELL, Rochester, Minn.: Clinical Application of Recent Studies in Diseases of the Liver. Illustrated with lantern slides.

FRED WISE, New York: Drug Eruptions. Illustrated with lantern slides.

FRANCIS C. WOOD, New York: Diagnosis of Cancer. Illustrated with lantern slides.

GEORGE A. WYETH, New York: Extension of the Surgery of Neoplastic Diseases.

AMERICAN HEART ASSOCIATION, New York: Valves of the Heart in Action. Motion picture film.

METROPOLITAN LIFE INSURANCE COMPANY, New York: (1) New Ways for Old (Diphtheria); (2) Overweight. Motion picture films.

MEDICAL DEPARTMENT OF THE NAVY, Washington, D. C.: (1) Training of Dental Technicians at Naval Dental School; (2) Rescue and Resuscitation of Apparently Drowned; (3) First Aid and Nursing. Motion picture films.

U. S. BUREAU OF MINES, Washington, D. C.: Health Work of the Bureau of Mines. Illustrated with lantern slides. Talk by R. R. Sayers.

U. S. DEPARTMENT OF AGRICULTURE, Washington: (1) The Honor of the Purple Stamp; (2) Clean Herds; (3) Out of the Shadows. Motion picture films.

AN UNUSUAL FEATURE

An unusual feature is scheduled for the Motion Picture Theater on Wednesday and Thursday from 5 to 6 p. m. Through the courtesy of the Bell Laboratories of the American Telephone and Telegraph Company, an electric stethoscope will be installed. This instrument magnifies heart sounds many times, so that every one in the audience may hear—without head phones—the different types of heart sounds and murmurs of normal and abnormal hearts during the exercise. The talks will be illustrated by lantern slides. The speakers for "The Clinical Application of the Electric Stethoscope" are: H. CLYDE SNOOK, Bell Research Laboratories; C. J. GAMBLE, University of Pennsylvania, and PAUL D. WHITE, Boston. In addition it is anticipated to have at this time a most unusual demonstration, the details of which will be announced in the *Daily Bulletin*.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

Tuesday, May 17, 8:30 p. m.

Music.

Call to Order by the President, WENDELL C. PHILLIPS, New York.

Invocation. REV. CHARLES WOOD.

ADDRESS. HIS EXCELLENCY THE PRESIDENT OF THE UNITED STATES.

Announcements. WILLIAM GERRY MORGAN, Chairman, Local Committee of Arrangements.

Address of Welcome. CHARLES S. WHITE, President of the Medical Society of the District of Columbia.

Music.

Introduction and Installation of President-Elect JABEZ NORTH JACKSON, Kansas City, Mo.

Address. JABEZ NORTH JACKSON.

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, as well as lists of committees, programs of the General Meeting, lists of entertainments, map of Washington and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON PRACTICE OF MEDICINE

MEETS IN BALLROOM AT MAYFLOWER HOTEL

OFFICERS OF SECTION

Chairman—ROLLIN T. WOODYATT, Chicago.

Vice Chairman—M. L. GRAVES, Houston, Texas.

Secretary—BRYCE W. FONTAINE, Memphis, Tenn.

Executive Committee—ELLIOTT P. JOSLIN, Boston; EUGENE S. KILGORE, San Francisco; ROLLIN T. WOODYATT, Chicago.

Wednesday, May 18—9 a. m.

Malta Fever: Epidemic of Thirty-Five Cases (Lantern Demonstration).
W. WARNER WATKINS, Phoenix, Ariz., and G. C. LAKE, Washington, D. C.
Discussion to be opened by ALLEN C. EUSTIS, New Orleans, and JOHN A. WITHERSPOON, Nashville, Tenn.

Treatment of Syphilis of the Central Nervous System (Lantern Demonstration). JOSEPH E. MOORE, Baltimore.
Discussion to be opened by L. M. GAINES, Atlanta, Ga., and HOMER F. SWIFT, New York.

Undiagnosed Cough: An Intensive Study of Two Hundred Cases (Lantern Demonstration).
WILLIAM C. VOORSANGER and FRED FIRESTONE, San Francisco.

New Growth of the Lungs (Lantern Demonstration).
CHEVALIER JACKSON, THOMAS MCCRAE and ELMER H. FUNK, Philadelphia.
Discussion on papers of DRS. VOORSANGER and FIRESTONE and DRS. JACKSON, MCCRAE and FUNK, to be opened by GERALD B. WEBB, Colorado Springs, Colo.; HUGH J. MORGAN, Nashville, Tenn.; PAUL H. RINGER, Asheville, N. C., and JOHN A. LICHTY, Clifton Springs, N. Y.

The Medical Cure of Duodenal Ulcer.
DOUGLAS VANDERHOOF, Richmond, Va.
Discussion to be opened by FRANKLIN W. WHITE, Boston, and CHESTER M. JONES, Newton, Mass.

The Nephroses (Lantern Demonstration).
J. B. MCELROY, Memphis, Tenn.
Discussion to be opened by ALFRED STENGEL, Philadelphia, and THOMAS B. FUTCHER, Baltimore.

Acute Pancreatitis Followed by Acute Diabetes.
LOUIS M. WARFIELD, Milwaukee.

Diabetic Gangrene in the South (Lantern Demonstration).
I. I. LEMANN, New Orleans.
Discussion on papers of DRS. WARFIELD and LEMANN, to be opened by JOSEPH H. PRATT, Boston; FREDERICK M. ALLEN, New York; ELLIOTT P. JOSLIN, Boston, and JAMES E. PAULLIN, Atlanta, Ga.

Thursday, May 19—9 a. m.

SYMPOSIUM

Chairman's Address: Psychic and Emotional Factors in General Diagnosis and Treatment.
ROLLIN T. WOODYATT, Chicago.

General Principles Pertaining to the Recognition and Management of Psychic and Emotional Influences.
J. RAMSAY HUNT, New York.

Emotional and Psychic Factors in the Course of Arterial Hypertension and Heart Disease.
NELLIS B. FOSTER, New York.

Emotional and Psychic Factors in the Production of Disorders of the Digestive Organs.
JAMES S. MCLESTER, Birmingham, Ala.

Emotional and Psychic Factors in the Course of Diabetes Mellitus and Exophthalmic Goiter, Laryngology and Ophthalmology. CHARLES HUGH NEILSON, St. Louis.
Discussion on papers of DRS. WOODYATT, HUNT, FOSTER, MCLESTER and NEILSON, to be opened by JAMES B. HERRICK, Chicago; L. F. BARKER, Baltimore; E. BATES BLOCK, Atlanta, Ga.; ARTHUR D. DUNN, Omaha; MAX EINHORN, New York; THOMAS R. BROWN, Baltimore; EUGENE S. KILGORE, San Francisco, and C. P. EMERSON, Indianapolis.

Experimental Contribution on Etiology, Diagnosis and Treatment of Pernicious Anemia (Lantern Demonstration). DAVID I. MACHT, Baltimore.

Treatment of Pernicious Anemia by a Diet Rich in Liver (Lantern Demonstration).
GEORGE R. MINOT and WILLIAM P. MURPHY, Boston.
Discussion on papers of DR. MACHT and DRS. MINOT and MURPHY, to be opened by H. M. CONNER, Rochester, Minn.; E. A. BAUMGARTNER, Clifton Springs, N. Y.; WALTER L. BIERRING, Des Moines, Iowa, and WALTER W. PALMER, New York.

Friday, May 20—9 a. m.

Election of Officers

The Hematology of Subacute Endocarditis (Lantern Demonstration). O. H. PERRY PEPPER, Philadelphia.

Obesity and Heart Disease (Lantern Demonstration).
STEWART R. ROBERTS, Atlanta, Ga.

Cardiac Disturbances Associated with Diseases of the Thyroid Gland (Lantern Demonstration).
JOHN PHILLIPS and JOHN P. ANDERSON, Cleveland.

Heart Disease as Seen in a Southern Clinic: A Clinical and Pathologic Survey.
C. T. STONE, Galveston, Texas.
Discussion on papers of DRS. PEPPER, ROBERTS, PHILLIPS and ANDERSON, and STONE, to be opened by ROGER I. LEE, Boston; GLENVILLE GIDDINGS, Atlanta, Ga.; FREDERICK A. WILLIUS, Rochester, Minn.; S. CALVIN SMITH, Philadelphia; LEWIS A. CONNER, New York; ALBERT A. HORNOR, Boston; W. S. THAYER, Baltimore, and PAUL DUDLEY WHITE, Boston.

Factors in the Postoperative Mortality of Exophthalmic Goiter (Lantern Demonstration).
H. S. PLUMMER, Rochester, Minn.
Discussion to be opened by FRANK H. LAHEY, Boston.

Observations on Metabolic Disturbances in Scleroderma (Lantern Demonstration).
WARFIELD T. LONGCOPE, Baltimore.
Discussion to be opened by HENRY A. CHRISTIAN, Boston, and JOHN H. STOKES, Philadelphia.

Cirrhosis of the Liver (Lantern Demonstration).
L. G. ROWNTREE, Rochester, Minn.
Discussion to be opened by ROGER S. MORRIS, Cincinnati, and M. L. GRAVES, Houston, Texas.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN MEMORIAL CONTINENTAL HALL

OFFICERS OF SECTION

Chairman—J. TATE MASON, Seattle.
Vice Chairman—J. DE J. PEMBERTON, Rochester, Minn.
Secretary—FRANK H. LAHEY, Boston.
Executive Committee—EVARTS A. GRAHAM, St. Louis; DALLAS B. PHEMISTER, Chicago; J. TATE MASON, Seattle.

Wednesday, May 18—2 p. m.

SYMPOSIUM ON FRACTURES

(FOR THE MORNING SESSION OF THE SYMPOSIUM SEE THE PROGRAM OF THE SECTION ON ORTHOPEDIC SURGERY)

Diagnosis and Treatment of Compression Fractures of the Spine (Lantern Demonstration). ROBERT B. OSGOOD, Boston.
Discussion to be opened by RUSSELL A. HIBBS, New York, and JAMES WALLACE, Pittsburgh.

Diagnosis and Treatment of Fractures of Lower Extremity of the Humerus (Lantern Demonstration).
NATHANIEL ALLISON, Boston.
Discussion to be opened by J. M. HITZROT, New York, and FRASER B. GURD, Montreal.

Diagnosis and Treatment of Fractures of the Lower Extremity of the Radius (Lantern Demonstration).
WILLIAM DARRACH, New York.
Discussion to be opened by H. H. M. LYLE, New York.

Diagnosis of Fractures of Os Calcis (Lantern Demonstration).
PHILIP WILSON, Boston.
Discussion to be opened by F. J. COTTON, Boston, and P. B. MAGNUSON, Chicago.

Thursday, May 19—2 p. m.

Chairman's Address. J. TATE MASON, Seattle.

The Early Diagnosis and Surgical Treatment of Bronchiectasis (Lantern Demonstration).
CARL A. HEDBLOM, Chicago.
Discussion to be opened by HOWARD LILIENTHAL, New York, and WYMAN WHITTEMORE, Boston.

The Noncalculous Gallbladder (Lantern Demonstration).
GEORGE P. MULLER, Philadelphia.
Discussion to be opened by JOHN M. T. FINNEY, Baltimore, and LESTER R. WHITAKER, Boston.

Colostomy and Posterior Resection for Carcinoma of the Rectum (Lantern Demonstration).
FRED W. RANKIN, Rochester, Minn.
Discussion to be opened by DANIEL F. JONES, Boston, and DAMON B. PFEIFFER, Philadelphia.

Partial Gastrectomy Versus Gastro-Enterostomy in the Surgical Treatment of Gastric and Duodenal Ulcers.
RICHARD LEWISOHN, New York.

Partial Gastrectomy (Lantern Demonstration).
J. SHELTON HORSLEY, Richmond, Va.

The Treatment of Lesions of the Stomach and Duodenum Associated with Hemorrhage (Lantern Demonstration).
DONALD C. BALFOUR, Rochester, Minn.
Discussion on Papers of DRS. LEWISOHN, HORSLEY and BALFOUR to be opened by CHARLES H. MAYO, Rochester, Minn.; GEORGE W. CRILE, Cleveland; FRANCIS S. MATHEWS, New York, and FRANK H. LAHEY, Boston.

Diaphragmatic Hernia (Lantern Demonstration).
JOHN HOMER WOOLSEY, San Francisco.
Discussion to be opened by PHILEMON E. TRUESDALE, Fall River, Mass., and BENJAMIN N. WADE, Portland, Ore.

Meningeal Irritation Resulting from the Extravasation of Blood in the Subarachnoid Space (Motion Picture and Lantern Demonstration). CHARLES BAGLEY, JR., Baltimore.
Discussion to be opened by HARRY H. KERR, Washington, and FRANCIS C. GRANT, Philadelphia.

Friday, May 20—2 p. m.

Election of Officers

The Surgical Treatment of Goiter with Hyperthyroidism.
E. R. ARN, Dayton, Ohio.

Regeneration of the Thyroid Gland and the Prevention of Recurrent Goiters (Lantern Demonstration).
J. EARL ELSE, Portland, Ore.

The Diagnosis and Results of Surgical Treatment of Malignant Goiter. MARTIN B. TINKER, Ithaca, N. Y.
Discussion on Papers of DRS. ARN, ELSE and TINKER to be opened by JOSEPH C. BLOODGOOD, Baltimore; HARRY G. SLOAN, Cleveland, and HOWARD M. CLUTE, Boston.

Controllable Factors in the Mortality of Acute Appendicitis: Fallacies in Present-Day Teaching (Lantern Demonstration). JOHN O. BOWER, Philadelphia.
Discussion to be opened by Stanley P. REIMANN, Philadelphia, and URBAN MAES, New Orleans.

Management of Acute Conditions of the Abdomen Complicated by Marked Ileus or Septic Invasion of the Peritoneum (Lantern Demonstration).
DONALD MACRAE, JR., Council Bluffs, Iowa.
Discussion to be opened by JOHN E. SUMMERS, Omaha, and WILLIAM A. FISHER, Baltimore.

Jejunostomy: Technic and Indication for This Life-Saving Operation (Lantern Demonstration).
A. I. MACKINNON, Lincoln, Neb.
Discussion to be opened by CHARLES GORDON HEYD, New York; DONALD GUTHRIE, Sayre, Pa., and ANGUS MCLEAN, Detroit.

How to Save More of our Intestinal Obstruction Cases.
WILLIAM B. HOLDEN, Portland, Ore.
Discussion to be opened by J. TATE MASON, Seattle, and EDWARD P. RICHARDSON, Boston.

Clinical Results in the Use of Dead (Preserved) Fascia Grafts for Hernia Repair (Lantern Demonstration).
AMOS R. KOONTZ, Baltimore.
Discussion to be opened by HARVEY B. STONE, Baltimore.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS IN MEMORIAL CONTINENTAL HALL

OFFICERS OF SECTION

Chairman—ARTHUR H. CURTIS, Chicago.
Vice Chairman—GEORGE GELLHORN, St. Louis.
Secretary—CARL HENRY DAVIS, Milwaukee.
Executive Committee—RUDOLPH W. HOLMES, Chicago; GEORGE GRAY WARD, New York; ARTHUR H. CURTIS, Chicago.

Wednesday, May 18—9 a. m.

Certain Relations Between Governments in Northern Europe and the Teaching and Practice of Obstetrics and Gynecology. F. C. HOLDEN, New York.

Results of Supervised Midwife Practice in Certain European Countries: Can We Draw a Lesson from This for the United States? GEORGE W. KOSMAK, New York.

Teaching Prenatal Care by Means of Posters (Lantern Demonstration). STUART B. BLAKELY, Binghamton, N. Y.

The Effect of Prenatal Care on the Size and Health of the New-Born. EFFA V. DAVIS, Chicago.

Maternal Mortality S. JOSEPHINE BAKER, Stamford, Conn.

Maternal Care, Postnatal. L. MAUD PARKER, Seattle.

Trial Labor as a Conservative Obstetric Procedure (Lantern Demonstration).
HAROLD BAILEY and H. C. WILLIAMSON, New York.

Dystocia in Contracted Pelves (Lantern Demonstration).
ALICE F. MAXWELL, San Francisco.

Gynecology and Obstetrics in Relation to Hospital Betterment.
FRANKLIN H. MARTIN, Chicago.

Discussion on Papers of DRS. HOLDEN, KOSMAK, BLAKELY, DAVIS, BAKER, PARKER, BAILEY and WILLIAMSON, MAXWELL and MARTIN to be opened by J. W. WILLIAMS, Baltimore; FRANK LYNCH, San Francisco, and N. S. HEANEY and RUDOLPH W. HOLMES, Chicago.

Thursday, May 19—9 a. m.

Chairman's Address: Indications for Surgical Intervention in Pelvic Lesions of Infectious Origin, Based on Seventeen Years' Laboratory and Clinical Study.
ARTHUR H. CURTIS, Chicago.

Posture Studies in Gynecology (Lantern Demonstration).
NORMAN F. MILLER, Iowa City.

The Surgical Use of High Frequency Current in Gynecology.
HOWARD A. KELLY and CURTIS F. BURNAM, Baltimore.

Causation of Sterility. SAMUEL R. MEAKER, Boston.

Clinical Study of Tubal Patency in Six Hundred Cases of Sterility by Method of Peruterine Insufflation Combined with Kymograph (Lantern Demonstration).
I. C. RUBIN, New York.

Menstrual Irregularities Versus the Female Sex Hormone (Lantern Demonstration).
ROBERT T. FRANK and M. A. GOLDBERGER, New York.

Discussion on Papers of DRS. MEAKER, RUBIN, and FRANK and GOLDBERGER to be opened by ALBERT H. ALDRIDGE, New York.

Treatment of Pelvic Inflammation (Lantern Demonstration).
LUCIUS E. BURCH, Nashville, Tenn.

A Further Study of the Clinical Significance of Blood Sedimentation as a Diagnostic and Preoperative Prognostic Aid in Gynecologic Conditions (Lantern Demonstration).
JOHN O. POLAK, Brooklyn.

Discussion on Papers of DRS. BURCH and POLAK to be opened by GEORGE GRAY WARD, New York, and JOSEPH L. BAER, Chicago.

Friday, May 20—9 a. m.

Election of Officers

Deep Roentgen-Ray Therapy of Peritoneal Carcinomatosis Following Carcinoma of the Ovary (Lantern Demonstration).
FLOYD E. KEENE, H. K. PANCOAST and E. P. PENDERGRASS, Philadelphia.

Paroxysmal Hypertension from Disease of the Abdominal Sympathetic. C. H. MAYO, Rochester, Minn.

Discussion to be opened by L. G. ROWNTREE, Rochester, Minn.

Postoperative Parotitis Following Abdominal Surgery.
LOUIS ANTUPIT, Hartford, Conn.

Postoperative Abdominal Hernia. ROBERT CRAIG, New York.

Laboratory Aid in Complications of Abdominal Surgery.
WILLIAM THALHEIMER, Milwaukee.

Clinical and Experimental Fistulas and Obstructions (Lantern Demonstration). WALTMAN WALTERS, Rochester, Minn.

The Management of Some Complications Following Abdominal Surgery. F. H. LAHEY, Boston.

Prevention of Postoperative Complications in Abdominal Surgery (Lantern Demonstration).
GEORGE W. CRILE and CHARLES C. HIGGINS, Cleveland.

Discussion on Papers of DRS. ANTUPIT, CRAIG, THALHEIMER, WALTERS, LAHEY, and CRILE and HIGGINS to be opened by DEAN LEWIS, Baltimore, and D. B. PHEMISTER, Chicago.

SECTION ON OPHTHALMOLOGY

MEETS IN HALL OF NATIONS, WASHINGTON HOTEL

OFFICERS OF SECTION

Chairman—JOHN A. DONOVAN, Butte, Mont.
Vice Chairman—WILLIAM H. CRISP, Denver.
Secretary—WILLIAM C. FINNOFF, Denver.
Executive Committee—MARCUS FEINGOLD,* New Orleans; ARNOLD KNAPP, New York; JOHN A. DONOVAN, Butte, Mont.

Fellows are reminded that the meetings of the section will be called to order promptly on the hour scheduled for opening. The formal reading of the papers will be omitted, as reprints of the papers on the program have already been delivered to Fellows.

Each essayist will be given ten minutes in which to summarize the points in his paper and introduce the discussion (except in the case of five minute papers), and five minutes in which to close the discussion.

The Fellows appointed to open the discussion of any paper will be allowed ten minutes. Subsequent speakers will be limited to five minutes.

The papers and all discussions will be printed and bound, forming the Transactions of the Section on Ophthalmology for 1927. Copies of the Transactions may be obtained at $1.50 each, if subscriptions are sent to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 North Dearborn Street, Chicago, by June 1, as only enough copies are printed to cover subscriptions received to the time of going to press.

Fellows are requested to register in the section registration book at the entrance. The full name and complete postoffice address should be written plainly.

Wednesday, May 18—2 p. m.

Chairman's Address. JOHN A. DONOVAN, Butte, Mont.

Orbital Meningo-Encephalocele Associated with Microphthalmia: Report of Case (Lantern Demonstration).
MARTIN COHEN, New York.

Discussion to be opened by EUGENE M. BLAKE, New Haven, Conn.

One Thousand Optic Canals: A Clinical, Anatomic and Roentgenologic Study (Lantern Demonstration).
HARRY A. GOALWIN, New York.

Discussion to be opened by G. E. PFAHLER, Philadelphia.

A Nonoperative Treatment of Inflammatory Glaucoma.
F. PARK LEWIS, Buffalo.

Discussion to be opened by ALLEN GREENWOOD, Boston.

Conjunctival Drain of the Anterior Chamber: An Operative Technic Used in Absolute Glaucoma.
HARRY S. GRADLE, Chicago.

Discussion to be opened by JOHN M. WHEELER, New York.

Stereophotography of the Anterior Eyeball and Fundus.
ROBERT VON DER HEYDT, Chicago.

Discussion to be opened by ARTHUR J. BEDELL, Albany, N. Y.

Lens Protein and Its Fractions: Preparation, and Immunologic and Chemical Properties. ALAN C. WOODS, Baltimore.

Discussion to be opened by ZENAS H. ELLIS, New York.

Thursday, May 19—2 p. m.

Demonstration Session: Exhibition of New Instruments and Appliances.

The Different Types of the Pathologic Visual Field.
HENNING RONNE, Copenhagen, Denmark.

Ocular Phenomena Produced by Basal Lesions of the Frontal Lobe (Lantern Demonstration).
WALTER I. LILLIE, Rochester, Minn.

Discussion to be opened by EMORY HILL, Richmond, Va.

The Ocular Fundus in the Acute Toxemias: An Analysis of Eight Hundred and Fifty Cases.
ALBERT L. BROWN, Cincinnati.

Discussion to be opened by JAMES P. FITZGERALD, Chicago.

The Selection of Test Type for Refraction.
S. J. BEACH, Portland, Me.

Discussion to be opened by W. B. LANCASTER, Boston.

Cycloplegics in Refraction. DAVID W. WELLS, Boston.

Discussion to be opened by WILLIAM ZENTMAYER, Philadelphia.

* Deceased.

Epinephrine in Progressive Myopia. MEYER WIENER, St. Louis.
Discussion to be opened by WILLIAM H. CRISP, Denver.

The Ophthalmologic Needs of the Internist.
HARLOW BROOKS, New York.
Discussion to be opened by E. V. L. BROWN, Chicago.

Friday, May 20—2 p. m.

Executive Session

Election of Officers

The Treatment of Abnormalities of the Intrinsic and Extrinsic Ocular Muscles. G. C. SAVAGE, Nashville, Tenn.
Discussion to be opened by EDWARD JACKSON, Denver.

The Crystalline Lens System (Lantern Demonstration).
JOHN O. MCREYNOLDS, Dallas, Texas.
Discussion to be opened by W. H. LUEDDE, St. Louis.

Cataract Extraction: Comparative Results Obtained by the Combined, Simple and Knapp-Torok Methods of Procedure. WALTER R. PARKER, Detroit.
Discussion to be opened by E. C. ELLETT, Memphis, Tenn.

Loss of Vitreous in Cataract Extraction (Lantern Demonstration). E. B. DUNPHY, Boston.
Discussion to be opened by ARNOLD KNAPP, New York.

Local Anesthesia in Ophthalmic Surgery (Lantern Demonstration). C. S. O'BRIEN, Iowa City.
Discussion to be opened by ALBERT E. BULSON, JR., Fort Wayne, Ind.

Congenital Cataract: A Plea for Variety in Its Surgical Treatment. L. WEBSTER FOX, Philadelphia.
Discussion to be opened by E. E. HOLT, JR., Portland, Me.

Personal Observations on Tuberculosis of the Eye: The Use of Tuberculin in Its Diagnosis and Treatment.
HUGO A. KIEFER and LEON SHULMAN, Los Angeles.
Discussion to be opened by T. B. HOLLOWAY, Philadelphia.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN HALL OF NATIONS, WASHINGTON HOTEL

OFFICERS OF SECTION

Chairman—GEORGE M. COATES, Philadelphia.
Vice Chairman—R. C. LYNCH, New Orleans.
Secretary—WILLIAM V. MULLIN, Cleveland.
Executive Committee—CHARLES W. RICHARDSON, Washington, D. C.; SAMUEL IGLAUER, Cincinnati; GEORGE M. COATES, Philadelphia.

Wednesday, May 18—9 a. m.

Chairman's Address. GEORGE M. COATES, Philadelphia.

Researches on the Saccus Endolymphaticus, Results and Surgical Applications. GEORGES PORTMANN, Bordeaux, France.
Discussion to be opened by J. GORDON WILSON, Chicago, and WELLS P. EAGLETON, Newark, N. J.

The Modus Operandi of Vertigo (Lantern Demonstration).
LESTER MEAD HUBBY, New York.
Discussion to be opened by FRANK L. DENNIS, Colorado Springs, Colo., and H. P. CAHILL, Boston.

The Importance of Ophthalmology and Otology in the Early Diagnosis of Brain Tumors (Lantern Demonstration).
E. R. CARPENTER, Dallas, Texas.
Discussion to be opened by LEWIS FISHER, Philadelphia, and CONRAD BERENS, JR., New York.

The Use of Larding Pork to Control Hemorrhage.
LEE M. HURD, New York.
Discussion to be opened by WALTER A. WELLS, Washington, D. C., and WILLIAM P. WHERRY, Omaha.

The Surgical Correction of Cleft Lip and Cleft Palate (Lantern Demonstration). GEORGE B. JOBSON, JR., Franklin, Pa.
Discussion to be opened by G. V. I. BROWN, Milwaukee, and VILRAY P. BLAIR, St. Louis.

Thursday, May 19—9 a. m.

The Intranasal Surgical Treatment of Chronic Maxillary Sinusitis (Lantern Demonstration).
BERT HEMPSTEAD, Rochester, Minn.
Discussion to be opened by A. J. LORIE, Kansas City, Mo.

A Critical Review of the External Frontal Sinus Operation (Lantern Demonstration).
WILLIAM MITHOEFER, Cincinnati.
Discussion to be opened by JOSEPH D. HEITGER, Louisville, and FRANCIS E. LEJEUNE, New Orleans.

Paranasal Sinus Infection and Swimming.
F. E. HASTY, Nashville, Tenn.
Discussion to be opened by H. MARSHALL TAYLOR, Jacksonville, Fla., and RALPH A. FENTON, Portland, Ore.

The Problem of Graduate Training in Clinical Medicine.
GEORGE E. SHAMBAUGH, Chicago.
Discussion to be opened by HARRIS P. MOSHER, Boston, and L. W. DEAN, Iowa City.

Progress and Results of Radium Treatment in Neoplasms of the Upper Air Passages (Lantern Demonstration).
G. ALLEN ROBINSON, New York.
Discussion to be opened by THOMAS E. JONES, Cleveland.

A Manifestation of Uremia in the Pharynx, Larynx, Trachea and Bronchi. M. C. MYERSON, New York.
Discussion to be opened by LEONARD G. ROWNTREE, Rochester, Minn.

Dysphonia: Its Significance and Management (Lantern Demonstration). GEORGE D. WOLF, New York.
Discussion to be opened by JOSEPH BECK, Chicago, and FRANK R. SPENCER, Boulder, Colo.

Friday, May 20—9 a. m.

Election of Officers

Exhibition of New Instruments and Appliances

Reports of Committees

Necrology.
WILLIAM B. CHAMBERLIN, Cleveland, Chairman; THOMAS J. HARRIS, New York; GEORGE L. RICHARDS, Fall River, Mass.

Lye Legislation.
CHEVALIER JACKSON, Philadelphia, Chairman; C. A. THIGPEN, Montgomery, Ala.; JOHN J. MCLOONE, Phoenix, Ariz.; T. E. FULLER, Texarkana, Ark.; C. F. WELTY, San Francisco; CHESTER H. BOWERS, Los Angeles; THOMAS E. CARMODY, Denver; E. TERRY SMITH, Hartford, Conn.; C. W. RICHARDSON, Washington, D. C.; J. A. ELLEGOOD, Wilmington, Del.; H. M. TAYLOR, Jacksonville, Fla.; DUNBAR ROY, Atlanta, Ga.; ROBERT L. NOURSE, Boise, Idaho; AUSTIN A. HAYDEN, Chicago; J. F. BARNHILL, Indianapolis; LEE W. DEAN, Iowa City; E. M. SEYDELL, Wichita, Kan.; J. A. STUCKY, Lexington, Ky.; R. C. LYNCH, New Orleans; OWEN SMITH, Portland, Me.; M. M. SAVAGE, Baltimore; W. F. ZINN, Baltimore; F. P. EMERSON, Boston; BURT R. SHURLY, Detroit; HORACE NEWHART, Minneapolis; E. F. HOWARD, Vicksburg, Miss.; M. F. ARBUCKLE, St. Louis; H. W. LOEB, St. Louis; GREENFIELD SLUDER, St. Louis; J. A. DONOVAN, Butte, Mont.; WILLIAM P. WHERRY, Omaha; J. ANDRE FULLER, Reno, Nev.; F. E. KITTREDGE, Nashua, N. H.; WELLS P. EAGLETON, Newark, N. J.; H. B. ORTON, Newark, N. J.; E. C. MATTHEWS, Albuquerque, N. M.; H. H. FORBES, New York; C. J. IMPERATORI, New York; T. H. HALSTED, Syracuse, N. Y.; H. H. BRIGGS, Asheville, N. C.; W. L. DIVEN, Bismarck, N. D.; WILLIAM B. CHAMBERLIN, Cleveland; SAMUEL IGLAUER, Cincinnati; W. E. DIXON, Oklahoma City; RALPH A. FENTON, Portland, Ore.; E. J. PATTERSON, Pittsburgh; J. W. LEECH, Providence, R. I.; J. W. JERVEY, Greenville, S. C.; JOHN B. GREGG, Sioux Falls, S. D.; RICHMOND MCKINNEY, Memphis, Tenn.; JOHN O. MCREYNOLDS, Dallas, Texas; J. C. ROBISON, Salt Lake City; EDMUND T. BROWN, Burlington, Vt.; CLIFTON M. MILLER, Richmond, Va.; E. FRANK CHASE, Seattle; T. W. MOORE, Huntington, W. Va.; N. M. BLACK, Milwaukee; GEORGE L. STRADER, Cheyenne, Wyo.

Examining Board in Otolaryngology.
JOSEPH C. BECK, Chicago, Chairman; ROBERT C. LYNCH, New Orleans.

Otorhinologic Hygiene of Swimming.
H. MARSHALL TAYLOR, Jacksonville, Fla., Chairman; HILL HASTINGS, Los Angeles; M. F. ARBUCKLE, St. Louis; LEE M. HURD, New York; RALPH A. FENTON, Portland, Ore.; F. E. HASTY, Nashville, Tenn.

The Adult Deaf and the Deafened Child.
HAROLD M. HAYS, New York, Chairman; WENDELL C. PHILLIPS, New York; GORDON BERRY, Worcester, Mass.; HORACE NEWHART, Minneapolis; GEORGE SHAMBAUGH, Chicago; ISAAC H. JONES, Los Angeles.

SYMPOSIUM ON BRONCHIAL ASTHMA

Skin Reactions in Patients with Asthma.
JAMES S. McLAUGHLIN, Philadelphia.
The Study and Treatment of Asthma (Lantern Demonstration).
J. ALEXANDER CLARKE, JR., Philadelphia.
Nose and Throat Observations in the Examination of Patients with Bronchial Asthma. PHILIP S. STOUT, Philadelphia.
Roentgen-Ray Observations in Asthma (Lantern Demonstration). W. F. MANGES, Philadelphia.
Bronchoscopy as an Aid in the Diagnosis and Treatment of Bronchial Asthma. LOUIS H. CLERF, Philadelphia.
Studies in the Etiology of Bronchial Asthma (Lantern Demonstration). JOHN EIMAN, Philadelphia.
Studies in the Treatment of Bronchial Asthma.
H. B. WILMER, Philadelphia.
Asthma: From the Standpoint of the Rhinologist (Lantern Demonstration). EDWIN McGINNIS, Chicago.
Interpretation of Microscopic Changes of Nasal Mucosa in Bronchial Asthma. HARRY P. FINCK, Boston.
Discussion on papers of DRS. McLAUGHLIN, CLARKE, STOUT, MANGES, CLERF, EIMAN, WILMER, McGINNIS and FINCK to be opened by GEORGE PINESS, Los Angeles, and GRAFTON TYLER BROWN, Washington, D. C.

SECTION ON DISEASES OF CHILDREN

MEETS IN BALLROOM AT MAYFLOWER HOTEL

OFFICERS OF SECTION

Chairman—HENRY J. GERSTENBERGER, Cleveland.
Vice Chairman—EDGAR P. COPELAND, Washington, D. C.
Secretary—HUGH McCULLOCH, St. Louis.
Executive Committee—EDGAR J. HUENEKENS, Minneapolis; CLIFFORD G. GRULEE, Chicago; HENRY J. GERSTENBERGER, Cleveland.

Wednesday, May 18—2 p. m.

Chairman's Address (Lantern Demonstration).
H. J. GERSTENBERGER, Cleveland.
Address. NASCIEMENTE GURGEL, Rio de Janiero, Brazil.
Results in the Convalescent Care of Two Hundred and Twenty-Five Children with Heart Disease over a Period of Five Years (Lantern Demonstration).
W. D. STROUD, Philadelphia.
Question of Exercise for Children with Organic Disease of the Heart. WILLIAM ST. LAWRENCE, New York.
The Incidence of Rheumatism in Children After Tonsillectomy (Lantern Demonstration). A. D. KAISER, Rochester, N. Y.
Congenital Anorectal Stricture with Megacolon.
JOSEPH BRENNEMANN, Chicago.
Cystoscopic Examination of Congenital Malformations of the Urinary Tract in Children (Lantern Demonstration).
HENRY F. HELMHOLZ, Rochester, Minn.
Stridor in Enlarged Thymus (Lantern Demonstration).
W. WALTER WASSON, Denver.

Wednesday, May 18—7 p. m.

Dinner of Section on Diseases of Children.

Thursday, May 19—2 p. m.

SYMPOSIUM ON PULMONARY AND BRONCHIAL GLAND TUBERCULOSIS

Pulmonary and Bronchial Gland Tuberculosis: General (Lantern Demonstration). E. L. OPIE, Philadelphia.
Clinical Diagnosis of Pulmonary and Bronchial Gland Tuberculosis (Lantern Demonstration).
T. C. HEMPELMANN, St. Louis.
Tuberculin and Serodiagnosis of Pulmonary and Bronchial Gland Tuberculosis. C. W. BURHANS, Cleveland.
Roentgenographic Diagnosis of Pulmonary and Bronchial Gland Tuberculosis. H. K. DUNHAM, Cincinnati.
Pulmonary and Bronchial Gland Tuberculosis: Prognosis: Prophylaxis and Therapy. J. C. GITTINGS, Philadelphia.

Friday, May 20—2 p. m.

Election of Officers

Address. GREGORIO ARAOZ ALFARO, Buenos Aires, Argentina.
Hunger and Appetite in Children.
C. ANDERSON ALDRICH, Winnetka, Ill.
The Malnourished Child: An Individual Intensive Method of Treatment. L. W. SAUER, Evanston, Ill.
Actinomycosis in the Lungs of Children (Lantern Demonstration). J. T. CHRISTISON, St. Paul.
Five Hundred Cases of Transfusion in Infancy (Lantern Demonstration). J. BUREN SIDBURY, Wilmington, N. C.
A Clinical Study of the Treatment of Erysipelas (Lantern Demonstration).
E. S. PLATOU and F. W. SCHLUTZ, Minneapolis.
Breast Feeding in Older Infants (Lantern Demonstration).
C. ULYSSES MOORE, Portland, Ore.
Feeding of Infants with Cleft Palate (Lantern Demonstration).
J. A. HENSKE, Omaha.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS IN HALL OF WILLARD HOTEL

OFFICERS OF SECTION

Chairman—W. DE B. MACNIDER, Chapel Hill, N. C.
Vice Chairman—ROGER I. LEE, Boston.
Secretary—NORMAN M. KEITH, Rochester, Minn.
Executive Committee—PAUL D. WHITE, Boston; THOMAS ORDWAY, Albany, N. Y.; W. DE B. MACNIDER, Chapel Hill, N. C.

Wednesday, May 18—2 p. m.

SYMPOSIUM ON THE TREATMENT OF HEART DISEASE

Venous Pressure in Cardiac Decompensation (Lantern Demonstration). J. A. E. EYSTER, Madison, Wis.
The Seat of the Emetic Action of Digitalis Bodies (Lantern Demonstration).
ROBERT A. HATCHER, New York, and SOMA WEISS, Boston.
Drug Treatment of Heart Disease. R. L. LEVY, New York.
The Treatment of Heart Disease Other Than by Drugs.
PAUL D. WHITE, Boston.
Treatment of Cardiac Disturbances Due to Thyroid Disease (Lantern Demonstration).
J. MARION READ, San Francisco.
The Rehabilitation of Cardiac Patients Through Organized Effort. L. A. CONNER, New York.

Thursday, May 19—2 p. m.

Chairman's Address. W. DE B. MACNIDER, Chapel Hill, N. C.
Fundamental Principles Underlying the Use of Specific Remedies for Infectious Diseases, with Especial Reference to Quinine in Malaria. C. C. BASS, New Orleans
Medical Treatment in Diseases of the Liver and Bile Passages.
A. M. SNELL and J. F. WEIR, Rochester, Minn.
Relative Value of Deep Roentgen Ray, Radium, Myomectomy and Hysterectomy in Uterine Fibromyoma.
W. D. JAMES, Hamlet, N. C.
The Use of Radium in Gynecology.
CHARLES C. NORRIS, Philadelphia.
General Survey of the Actual Therapeutic Value of Hydrotherapy. GUY HINSDALE, Hot Springs, Va.
Discussion to be opened by G. K. ABBOTT, Washington, D. C.
The Use and Abuse of Physical Therapeutics.
F. B. GRANGER, Boston.

Friday, May 20—2 p. m.

Election of Officers

Clinical Results Obtained from Tryparsamide Therapy in Cerebrospinal Syphilis. W. F. LORENZ, Madison, Wis.
The Treatment of "Functional" Digestive Disturbances.
WALTER C. ALVAREZ, Rochester, Minn.
Control of Hiccup by Inhalation of Carbon Dioxide: Report of Cases. RUSSELL F. SHELDON, Boston.
The Use of Quinidine in Ectopic Rhythms.
C. W. BARRIER, JR., Fort Worth, Texas.

The Absorption of Strophanthin Following Sublinqual Administration (Lantern Demonstration).
CARY EGGLESTON, New York, and THOMAS J. WHITE, Jersey City, N. J.

The Incidence and Management of Hypertension, with a Note on Sulphocyanate Therapy (Lantern Demonstration).
LESLIE T. GAGER, New York.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN HALL OF WILLARD HOTEL

OFFICERS OF SECTION

Chairman—ROY G. HOSKINS, Columbus, Ohio.
Vice Chairman—H. R. WAHL, Kansas City, Mo.
Secretary—JOSIAH J. MOORE, Chicago.
Executive Committee—CHARLES W. GREENE, Columbia, Mo.; HARRY J. CORPER, Denver; ROY G. HOSKINS, Columbus, Ohio.

Wednesday, May 18—9 a. m.

Chairman's Address: The Relation of the Suprarenal Gland to the Sympathetic Nervous System.
R. G. HOSKINS, Columbus, Ohio.

Some Observations on the Sphincter of the Choledochus (Lantern Demonstration).
A. S. GIORDANO, South Bend, Ind.

Regulation of the Flow of Bile (Lantern Demonstration).
C. E. BURGET, Chicago.

The Vascular Lesions of Portal Cirrhosis.
A. H. MCINDOE, Rochester, Minn.

The Cardiovascular Response in Experimental Nephritis.
F. W. HARTMAN, Detroit.

The Effect of High Protein Diet on the Kidneys (Lantern Demonstration).
T. S. MOISE and A. H. SMITH, New Haven, Conn.

Five Years' Application of the Kahn Test.
R. L. KAHN, Lansing, Mich.

Thursday, May 19—9 a. m.

Drunkenness: A Quantitative Study of Acute Alcoholic Intoxication. EMIL BOGEN, Cincinnati.

Toxins of the Tubercle Bacillus (Lantern Demonstration).
FREDERICK EBERSON, San Francisco.

Tuberculosis (Lantern Demonstration).
H. J. CORPER, Denver.

The Etiology of Measles. WILLIAM E. CARY, Chicago.

The Effect of Antipneumococcus Serum on the Leukocytes in Bacteremia (Lantern Demonstration).
WILLIAM H. PARK and JESSE GODFREY M. BULLOWA, New York.

The Pathology of Pertussis (Lantern Demonstration).
L. W. SMITH, Boston.

A New Method of Colorimetry (Lantern Demonstration).
WILLIAM G. EXTON, New York.

Friday, May 20—9 a. m.

Election of Officers

Sugar Tolerance as an Aid to Diagnosis (Lantern Demonstration). A. W. ROWE, Boston.

Properties of Blueberry Leaf Extract in Relation to Carbohydrate Metabolism (Lantern Demonstration).
FREDERICK M. ALLEN, Morristown, N. J.

Effect of Thyroid on Calcium (Lantern Demonstration).
JOSEPH AUB and WALTER BAUER, Boston.

The Structure and Properties of Heparin.
W. H. HOWELL, Baltimore.

Chronic Splenomegalias.
WILLIAM C. MACCARTY, Rochester, Minn.

Further Investigations Bearing on Gye's Hypothesis of the Etiology of Malignant Tumors.
JOHN A. KOLMER, Philadelphia.

The Danger of Incomplete Operations in Apparently Innocent Tumors and the Question of Tissue Examination and Diagnosis in the Operation Room (Lantern Demonstration). JOSEPH C. BLOODGOOD, Baltimore.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN HALL OF RALEIGH HOTEL

OFFICERS OF SECTION

Chairman—WILLIAM HOUSE, Portland, Ore.
Vice Chairman—GEORGE WASHINGTON HALL, Chicago.
Secretary—LEWIS J. POLLOCK, Chicago.
Executive Committee—EDWIN G. ZABRISKIE, New York; JAMES B. AYER, Boston; WILLIAM HOUSE, Portland, Ore.

Wednesday, May 18—2 p. m.

Chairman's Address. WILLIAM HOUSE, Portland, Ore.

The Psychoneuroses: Their Problems in a General Hospital.
GROVES B. SMITH, Detroit.

Mental Symptoms in Relation to General Practice.
CORNELIUS C. WHOLEY, Pittsburgh.

The Phantasy of Not Belonging to One's Family.
PHILIP R. LEHRMAN, New York.

The Juvenile Delinquent. JOSEPH MCIVER, Philadelphia.

The Effect of Nonspecific Protein Therapy on the Blood and Spinal Fluid in General Paralysis (Lantern Demonstration). GEORGE W. HALL and F. J. GERTY, Chicago.

Mental Aspect of Leprosy.
L. L. CAZENAVETTE, New Orleans.

Thursday, May 19—2 p. m.

The Diagnosis and Treatment of Epidemic Encephalitis.
WALTER J. FREEMAN, JR., Washington, D. C.

The Acute Psychiatric Types of Epidemic Encephalitis.
IRVING J. SANDS, Brooklyn.

Further Studies on the Etiologic Relationship of Streptococci to Epidemic Encephalitis, Epidemic Hiccup, Spasmodic Torticollis and Chorea (Lantern Demonstration).
EDWARD C. ROSENOW, Rochester, Minn.

Fourteen Years' Experience with Fraction Section of Sensory Root as the Radical Operation for Trigeminal Neuralgia. CHARLES H. FRAZIER, Philadelphia.

Physiology and Treatment of Transient Hemiplegia.
HOWARD C. NAFFZIGER, San Francisco.

Cerebrospinal Fluid Pressure (Lantern Demonstration).
EUGENE S. KILGORE, San Francisco.

Friday, May 20—2 p. m.

Election of Officers

A Case of Frontal Lobe Tumor Simulating Epidemic Encephalitis, with Parkinson's Syndrome (Lantern Demonstration).
EDWARD LIVINGSTON HUNT and J. R. LISA, New York.

Cerebellar Phenomena in Lesions of the Temporal Lobe.
I. LEON MEYERS, Los Angeles.

Dilatation and Engorgement of Cortical Veins Simulating Tumor of the Brain. ALFRED GORDON, Philadelphia.

The Management of Locomotor Ataxia.
DAVID EDWARD HOAG, New York.

Acute Circumscribed Edema (Quincke) (Lantern Demonstration). H. H. DRYSDALE, Cleveland.

Hereditary Ataxia (Lantern Demonstration).
GLENVILLE GIDDINGS, Atlanta, Ga.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN ROSE ROOM, WASHINGTON HOTEL

OFFICERS OF SECTION

Chairman—JAMES HERBERT MITCHELL, Chicago.
Vice Chairman—FRED D. WEIDMAN, Philadelphia.
Secretary—WILLIAM H. GUY, Pittsburgh.
Executive Committee—JOHN E. LANE, New Haven, Conn.; FRED WISE, New York; JAMES HERBERT MITCHELL, Chicago.

Wednesday, May 18—2 p. m.

Chairman's Address. JAMES HERBERT MITCHELL, Chicago.

The Use of Tetraiodomethenamine in Flexible Collodion in the Treatment of Dermatophytosis (Lantern Demonstration).
HERMAN SHARLIT and WALTER JAMES HIGHMAN, New York.

Present State and Frequency of Epidermophytosis in Europe.
KARL L. KARRENBERG, Hamburg, Germany.
Discussion on Papers of DRS. SHARLIT and HIGHMAN and DR. KARRENBERG to be opened by FRED D. WEIDMAN, Philadelphia.

Further Studies on Bromide Intoxication.
UDO J. WILE, Ann Arbor, Mich.
Discussion to be opened by WILLIAM H. GUY, Pittsburgh.

The Treatment of Lupus Erythematosus; Lupus Vulgaris; The Tuberculids and Tuberculosis of the Skin with Gold Compounds.
HENRY H. WHITEHOUSE and PAUL E. BECHET, New York.
Discussion to be opened by JAY FRANK SCHAMBERG, Philadelphia.

Pellagra Among Chronic Alcoholics (Lantern Demonstration).
JOSEPH V. KLAUDER and N. W. WINKELMAN, Philadelphia.
Discussion to be opened by JOSEPH GOLDBERGER, Washington, D. C.

The Control of Health After Eczema and Psoriasis (Lantern Demonstration). FRANCIS LOWELL BURNETT, Boston.
Discussion to be opened by WILLIAM H. ROBEY, JR., Boston.

Thursday, May 19—2 p. m.

Organic Luetin: Its Use in the Diagnosis of Syphilis (Lantern Demonstration). LESTER HOLLANDER, Pittsburgh.
Discussion to be opened by JOHN A. KOLMER, Philadelphia.

The Third Year Results with Malaria Therapy of Neurosyphilis (Lantern Demonstration).
PAUL A. O'LEARY, Rochester, Minn.
Discussion to be opened by HAROLD N. COLE, Cleveland.

Pregnancy and Neurosyphilis (Lantern Demonstration).
GEORGE H. BELOTE, Ann Arbor, Mich.
Discussion to be opened by J. E. MOORE, Baltimore.

Clinical Observations on Bismuth Arsphenamine Sulphonate in the Treatment of Syphilis (Lantern Demonstration).
JOHN H. STOKES and STANLEY O. CHAMBERS, Philadelphia.
Discussion to be opened by GEORGE W. RAIZISS, Philadelphia, and PAUL A. O'LEARY, Rochester, Minn.

The Clinical Excretion of Mercury After Intramuscular Injections and Inunctions (Lantern Demonstration).
H. N. COLE, JOHN A. GAMMEL, JOHN A. RAUSCHKOLB, NORA SCHREIBER and TORALD SOLLMANN, Cleveland.
Discussion to be opened by FREDERICK M. JACOB, Pittsburgh.

Bismuth in the Treatment of Congenital Syphilis (Lantern Demonstration). CARROLL S. WRIGHT, Philadelphia.
Discussion to be opened by JOSEPH GARDNER HOPKINS, New York.

The Prognosis of Congenital Syphilis (Lantern Demonstration).
A. BENSON CANNON, New York.
Discussion to be opened by UDO J. WILE, Ann Arbor, Mich.

Friday, May 20—2 p. m.

Election of Officers

Paget's Disease of the Nipple Not a Precancerous Stage but an Epidermoid Cancer Demanding Early Removal of the Breast. L. M. PAUTRIER, Strasbourg, France.

Cosmetics and Their Relation to Dermatology.
E. B. TAUBER, Cincinnati.
Discussion to be opened by HAROLD N. COLE, Cleveland.

The "Grenz" (Infra-Roentgen) Rays in Dermatology: Preliminary Report of Clinical and Biologic Observations.
J. J. ELLER and GUSTAV BUCKY, New York.
Discussion to be opened by GEORGE M. MACKEE, New York.

Blood Calcium in the Urticarias.
SIGMUND S. GREENBAUM, Philadelphia.
Discussion to be opened by RICHARD L. SUTTON, Kansas City, Mo.

A Study of Tattooing and Methods of Its Removal (Lantern Demonstration). MARVIN D. SHIE, Cleveland.
Discussion to be opened by LOUIS I. HARRIS, New York.

A Study of the Skin in Five Hundred Cases of Diabetes (Lantern Demonstration).
ARTHUR M. GREENWOOD, Boston.
Discussion to be opened by C. GUY LANE, Boston.

The Use of Gentian Violet Preparations in Diseases of the Skin. A. R. MCFARLAND, Rochester, N. Y.
Discussion to be opened by JOHN H. STOKES, Philadelphia.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN UPPER HALL OF CONCORDIA CHURCH

OFFICERS OF SECTION

Chairman—W. F. DRAPER, Washington, D. C.
Vice Chairman—I. D. RAWLINGS, Springfield, Ill.
Secretary—E. L. BISHOP, Nashville, Tenn.
Executive Committee—OSCAR DOWLING, Shreveport, La.; MATTHIAS NICOLL, JR., Albany, N. Y.; W. F. DRAPER, Washington, D. C.

Wednesday, May 18—9 a. m.

Relations of Industrial Medical Departments to Community Health Programs.
WILLIAM A. SAWYER, Rochester, N. Y.
Discussion to be opened by LLOYD NOLAND, Fairfield, Ala., and EMERY HAYHURST, Columbus, Ohio.

Chairman's Address: The Unexplored Field of Preventive Medicine in Private Practice.
W. F. DRAPER, Washington, D. C.

A Study of Lead Poisoning in an Enameling Plant.
W. S. LEATHERS and HUGH J. MORGAN, Nashville, Tenn.
Discussion to be opened by A. J. LANZA, New York.

Lead Hazards. J. P. LEAKE, Washington, D. C.
Discussion to be opened by ALBERT J. CHESLEY, St. Paul, and DAVID LINN EDSALL, Boston.

Reasons for the Increasing Mortality from Heart Disease.
HENRY ALBERT, Des Moines, Iowa.
Discussion to be opened by HAVEN EMERSON, New York, and HERMAN N. BUNDESEN, Chicago.

Thursday, May 19—9 a. m.

Host Susceptibility to Typhoid, Dysentery, Diarrhea and "Food Poisoning." LLOYD ARNOLD, Chicago.
Discussion to be opened by I. D. RAWLINGS, Springfield, Ill.

Dyersburg Epidemic.
H. C. STEWART and WILLIAM LITTERER, Nashville, Tenn.
Discussion to be opened by H. G. GRANT, Richmond, Va.

The Epidemiology of Rural Typhoid (Lantern Demonstration). D. G. GILL, Montgomery, Ala.
Discussion to be opened by S. W. WELCH, Montgomery, Ala., and H. G. GRANT, Richmond, Va.

The Future of County Health Work (Lantern Demonstration). W. G. SMILLIE, New York.
Discussion to be opened by W. K. SHARP, Nashville, Tenn.

Progress and Status of Local Health Work in Ohio.
JOHN E. MONGER, Columbus, Ohio.
Discussion to be opened by K. E. MILLER, New Orleans.

Critical Analysis of County Health Work.
C. O'H. LAUGHINGHOUSE, Raleigh, N. C.
Discussion to be opened by JOHN A. FERRELL, New York.

Friday, May 20—9 a. m.

Election of Officers

The Appraisal of Public Health Activity.
ALLEN W. FREEMAN, Baltimore.

Seasonal Variation in Growth of Children (Lantern Demonstration). HAVEN EMERSON, New York.
Discussion to be opened by ALFRED F. HESS, New York, and RICHARD SMITH, Boston.

Observations in the Underweight Clinics in the Schools of Massachusetts (Lantern Demonstration).
HENRY D. CHADWICK, Westfield, Mass.
Discussion to be opened by E. L. OPIE, Philadelphia.

The Growth of Children that are Below Average Weight (Lantern Demonstration).
FRANK L. ROBERTS, Trenton, Tenn.
Discussion to be opened by FELIX J. UNDERWOOD, Jackson, Miss.

Progress of Breast Feeding in New York State.
FRANK HOWARD RICHARDSON, Brooklyn.
Discussion to be opened by J. MASON KNOX, Baltimore.

SECTION ON UROLOGY

MEETS IN ROSE ROOM, WASHINGTON HOTEL

OFFICERS OF SECTION

Chairman—GEORGE GILBERT SMITH, Boston.
Vice Chairman—ALFRED I. FOLSOM, Dallas, Texas.
Secretary—HERMON C. BUMPUS, JR., Rochester, Minn.
Executive Committee—JOHN T. GERAGHTY,* Baltimore; B. A. THOMAS, Philadelphia; GEORGE GILBERT SMITH, Boston.

Wednesday, May 18—9 a. m.

Electrotome Excision of Prostatic Bar (Lantern Demonstration). C. W. COLLINGS, New York.
Discussion to be opened by ALEXANDER RANDALL, Philadelphia.

Ulceration of the Urinary Bladder as a Late Effect of Radium Applications to the Uterus. A. L. DEAN, JR., New York.
Discussion to be opened by E. L. KEYES, New York.

SYMPOSIUM ON THE TREATMENT OF BLADDER NEOPLASM

Consideration of Bladder Tumors with Special Regard to the Therapeutic Measures Best Suited to the Different Types (Lantern Demonstration). W. A. FRONTZ, Baltimore.

Principles Governing the Local Treatment of Bladder Carcinoma (Lantern Demonstration). E. L. KEYES, New York.

Changes in the Bladder Following Resection: An Experimental Study (Lantern Demonstration). H. L. KRETSCHMER, Chicago.

End-Results of Radium Removal of Carcinoma of the Bladder. B. S. BARRINGER, New York.
Discussion on Papers of DRS. FRONTZ, KEYES, KRETSCHMER and BARRINGER to be opened by EDWIN BEER, New York.

Thursday, May 19—9 a. m.

Chairman's Address: The Circulation as a Factor in Prostatic Surgery. GEORGE GILBERT SMITH, Boston.

Complete Closure of the Bladder Following Prostatectomy (Lantern Demonstration). W. E. LOWER, Cleveland.
Discussion to be opened by A. L. CHUTE, Boston.

Seminal Vesicle and Prostatic Foci in Pelvic, Perirectal and Ischiorectal Suppuration in Males (Lantern Demonstration). J. H. MORRISSEY, New York.
Discussion to be opened by LEON HERMAN, Philadelphia.

Heliotherapy in Genito-Urinary Tuberculosis (Lantern Demonstration). W. G. SHULTZ, Tucson, Ariz.
Discussion to be opened by C. R. O'Crowley, Newark, N. J.

The Value of the Inlying Ureteral Catheter in the Treatment of Acute and Chronic Pyelonephritis (Lantern Demonstration). D. N. EISENDRATH, Chicago.

Pyelonephritis and Its Relation to Nonsyphilitic Urethritis (Lantern Demonstration). B. C. CORBUS, Chicago.

Renal Distortion (Lantern Demonstration). G. W. BELCHER, Cleveland.
Discussion on Papers of DRS. EISENDRATH, CORBUS and BELCHER to be opened by A. H. CROSBIE, Boston.

Friday, May 20—9 a. m.

Election of Officers

Observations on the Formation of Vesical Calculi (Lantern Demonstration). B. H. HAGER and T. B. MAGATH, Rochester, Minn.
Discussion to be opened by F. T. LAU, New York.

Congenital Obstruction of the Posterior Urethra (Lantern Demonstration). R. V. DAY, Los Angeles, and C. S. VIVIAN, Phoenix, Ariz.

Relief of Congenital Incontinence of Urine by Operation (Lantern Demonstration). O. S. LOWSLEY, New York.
Discussion on Papers of DRS. DAY and VIVIAN and DR. LOWSLEY to be opened by R. E. CUMMING, Detroit.

Observations on the Physiology and Therapy of the Seminal Duct (Lantern Demonstration). W. T. BELFIELD and H. C. ROLNICK, Chicago.

Treatment of Epididymis—Observation in Three Thousand Cases (Lantern Demonstration). M. F. CAMPBELL, New York.
Discussion on Papers of DRS. BELFIELD and ROLNICK and DR. CAMPBELL to be opened by J. F. MCCARTHY and J. SYDNEY RITTER, New York.

Symptomatic Varicocele. JOHN BATE, Louisville, Ky.
Discussion to be opened by T. D. MOORE, Memphis, Tenn.

* Deceased.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN HALL OF RALEIGH HOTEL

OFFICERS OF SECTION

Chairman—J. P. LORD, Omaha.
Vice Chairman—JAMES ARCHER O'REILLY, St. Louis.
Secretary—H. W. MEYERDING, Rochester, Minn.
Executive Committee—F. J. GAENSLEN, Milwaukee; FRANK R. OBER, Boston; J. P. LORD, Omaha.

Wednesday, May 18—9 a. m.

SYMPOSIUM ON FRACTURES

(FOR THE AFTERNOON SESSION OF THE SYMPOSIUM SEE THE PROGRAM OF THE SECTION ON SURGERY, GENERAL AND ABDOMINAL)

Indications for Operative Treatment. CHARLES L. SCUDDER, Boston.

Influence of War Surgery on Treatment of Fractures in Great Britain. WALTER ROWLEY BRISTOW, London, England.

Traction and Suspension. JOSEPH BLAKE, New York.

Diagnosis and Treatment of Fractures of the Shaft of the Femur. KELLOGG SPEED, Chicago.
Discussion to be opened by M. L. HARRIS, Chicago; EMMETT RIXFORD, San Francisco, and W. L. ESTES, Bethlehem, Pa.

Thursday, May 19—9 a. m.

Abnormalities of the Lower Back. J. ARCHER O'REILLY, St. Louis.
Discussion to be opened by T. A. WILLIS, Cleveland, and R. E. HUMPHRIES and H. L. VON LACKUM, New York.

Unusual Cases of Tumor of the Spinal Cord. GEORGE E. BENNETT, Baltimore.
Discussion to be opened by EDWIN W. RYERSON, Chicago, and A. W. ADSON, Rochester, Minn.

Laminectomy: An Analysis of Operations Performed for Various Lesions. EDWIN W. RYERSON, Chicago.
Discussion to be opened by ERNEST SACHS, St. Louis; D. B. Phemister, Chicago; G. E. BENNETT, Baltimore, and A. W. ADSON, Rochester, Minn.

Chairman's Address. J. P. LORD, Omaha.

The Treatment of Scoliosis (Lantern Demonstration). FRANK R. OBER, Boston.
Discussion to be opened by J. ARCHER O'REILLY, St. Louis, and SAMUEL KLEINBERG, New York.

Variations in Operative Treatment for Scoliosis (Lantern Demonstration). ARMITAGE WHITMAN, New York.
Discussion to be opened by H. W. ORR, Lincoln, Neb.; SAMUEL KLEINBERG, New York, and EDWIN W. RYERSON, Chicago.

Sacro-Iliac Arthrodesis: Author's Technic, Indication and Late Results (Lantern Demonstration). F. J. GAENSLEN, Milwaukee.
Discussion to be opened by ARMITAGE WHITMAN, New York; G. E. BENNETT, Baltimore, and M. N. SMITH-PETERSEN, Boston.

Friday, May 20—9 a. m.

Election of Officers

Recurring Dislocation of the Shoulder (Lantern Demonstration). W. B. CARRELL, Dallas, Texas.
Discussion to be opened by WILLIS C. CAMPBELL, Memphis, Tenn.; F. J. COTTON, Boston; W. W. PLUMMER, Buffalo, and FRED ALBEE, New York.

Gonorrheal Arthritis. B. A. THOMAS, Philadelphia.
Discussion to be opened by R. B. OSGOOD, Boston; R. L. DIVELEY, Kansas City, Mo., and D. P. WILLARD, Philadelphia.

The Relationship of Physical Therapy to Orthopedic Surgery. ALBERT H. FREIBERG, Cincinnati.
Discussion to be opened by J. W. SEVER, Boston; CHARLES OGILVY, New York, and H. W. ORR, Lincoln, Neb.

Fusion Operations on the Foot (Lantern Demonstration). ARTHUR B. GILL, Philadelphia.
Discussion to be opened by FRED ALBEE, New York; J. O. WALLACE, Pittsburgh; R. B. OSGOOD, Boston, and WILLIS C. CAMPBELL, Memphis, Tenn.

Reconstruction Operation of the Hip (Lantern Demonstration). W. B. OWEN, Louisville, Ky.
Discussion to be opened by E. G. BRACKETT, Boston; WILLIS C. CAMPBELL, Memphis, Tenn., and FRED ALBEE and CHARLTON WALLACE, New York.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN UPPER HALL OF CONCORDIA CHURCH

OFFICERS OF SECTION

Chairman—JEROME M. LYNCH, New York.
Vice Chairman—JOSEPH SAILER, Philadelphia.
Secretary—GEORGE B. EUSTERMAN, Rochester, Minn.
Executive Committee—RALPH W. JACKSON, Fall River, Mass.; SIDNEY K. SIMON, New Orleans; JEROME M. LYNCH, New York.

Wednesday, May 18—2 p. m.

Intestinal Stasis: Functional Types (Lantern Demonstration). M. I. BIERMAN, Washington, D. C.

Treatment of Gastric Hemorrhage (Lantern Demonstration). A. F. R. ANDRESEN, Brooklyn.

Apparent Hour-Glass Stomach, Cured by Medical Means (Lantern Demonstration). MAX EINHORN, New York.

Enemas—Some Uses and Abuses. LOUIS J. HIRSCHMAN, Detroit.

Intestinal Amebiasis in Man. W. M. JAMES, Panama, R. P.

Carcinoid Tumors of the Small Intestine, with Report of a Case Complicated by Intussusception in an Adult (Lantern Demonstration). ALEXIUS MCGLANNAN and STANDISH MCCLEARY, Baltimore.

Carcinoma of the Rectum Secondary to Adenoma (Lantern Demonstration). FRANK C. YEOMANS, New York.

Thursday, May 19—2 p. m.

Chairman's Address (Lantern Demonstration). JEROME M. LYNCH, New York.

Nonspecific Ulcerative Colitis. B. B. CROHN, New York.

Abdominal Migraine. C. L. HARTSOCK, Cleveland.

Further Studies on the Physiology of External Pancreatic Secretion (Lantern Demonstration). A. C. IVY, Chicago.

Cholecystography. WILLIAM H. STEWART, New York.

The Effects of Obstructive Lesions of the Common Duct on the Liver (Lantern Demonstration). E. S. JUDD and V. E. S. COUNSELLER, Rochester, Minn.

Anorectal Diseases: Present Status of Diagnosis and Treatment. ALOIS B. GRAHAM, Indianapolis.

Friday, May 20—2 p. m.

Election of Officers

Deductions from One Hundred Consecutive Testings of Pancreatic Function (Lantern Demonstration). ANTHONY BASSLER and J. RAYMOND LUTZ, New York.

Clinical Aspects of Jaundice (Lantern Demonstration). C. S. MCVICAR, Rochester, Minn.

Upper Gastro-Intestinal Diseases Associated with Syphilis (Lantern Demonstration). H. L. BOCKUS and JOSEPH BANK, Philadelphia.

Duodenal Ulcer Symptom Complex in Patients Not Having Ulcer (Lantern Demonstration). IRVING GRAY, Brooklyn.

Experimental Studies on Chronic Ulcerative Colitis with Reference to a Bacterial Etiology. MOSES PAULSON, Baltimore.

Volvulus of Cecum and Ascending Colon (Lantern Demonstration). J. P. PRATT, Detroit.

SECTION ON RADIOLOGY

MEETS IN LOWER HALL OF CONCORDIA CHURCH

OFFICERS OF SECTION

Chairman—ALBERT SOILAND, Los Angeles.
Vice Chairman—ERNEST C. SAMUEL, New Orleans.
Secretary—FRED M. HODGES, Richmond, Va.

Wednesday, May 18—2 p. m.

Chairman's Address. ALBERT SOILAND, Los Angeles.

The Duodenal Curve Roentgenologically Considered (Lantern Demonstration). EDWARD S. BLAINE, Chicago.
Discussion to be opened by A. L. GRAY, Richmond, Va.

Diverticula of the Small Intestine: Incidence and Symptomatology, with Illustrative Case Histories. IRVING S. INGBER and FREDERICK H. RODENBAUGH, San Francisco.
Discussion to be opened by LEWIS G. COLE, New York.

Benign Tumors of the Stomach from the Roentgenologic Point of View (Lantern Demonstration). A. B. MOORE, Rochester, Minn.
Discussion to be opened by GEORGE W. HOLMES, Boston.

Pain: Its Value; Its Elusiveness. MAXIMILIAN J. HUBENY, Chicago.
Discussion to be opened by F. W. MACKOY, Milwaukee.

Radium in the Treatment of Vascular Nevi (Lantern Demonstration). F. E. SIMPSON and R. E. FLESHER, Chicago.
Discussion to be opened by GEORGE W. GRIER, Pittsburgh.

Summary of Roentgen-Ray Therapy in Dermatology. GEORGE M. MACKEE, New York.
Discussion to be opened by H. H. HAZEN, Washington, D. C.

Thursday, May 19—2 p. m.

Experimental Investigation of the Therapeutic Value of a Combination of Colloidal Lead and Roentgen Rays in the Treatment of Cancer (Lantern Demonstration). FRANCIS CARTER WOOD, New York.
Discussion to be opened by J. SHELTON HORSLEY, Richmond, Va.

The Combination of Colloidal Lead and Radiation in Cancer Therapy (Lantern Demonstration). HENRY J. ULLMANN, Santa Barbara, Calif.
Discussion to be opened by O. N. MELAND, Los Angeles.

Radium in Massive Dosages in the Therapy of Cancer (Lantern Demonstration). DOUGLAS QUICK, New York.
Discussion to be opened by CURTIS F. BURNAM, Baltimore.

The Value of Glucose Injections During Radiation Treatment of Malignant Disease. G. E. PFAHLER and B. P. WIDMANN, Philadelphia.
Discussion to be opened by HOWARD P. DOUB, Detroit.

Radiation Therapy in the Treatment of Carcinoma of the Thyroid Gland (Lantern Demonstration). U. V. PORTMANN, Cleveland.
Discussion to be opened by ALLEN GRAHAM, Cleveland.

Combined Methods of Treatment in Uterine Carcinoma. WILLIAM L. CLARK, Philadelphia.
Discussion to be opened by H. H. BOWING, Rochester, Minn.

The Management of Cancer of the Breast. ARTHUR W. ERSKINE, Cedar Rapids, Iowa.
Discussion to be opened by A. W. CRANE, Kalamazoo, Mich.

Cancer of the Tongue. WILLIAM H. SCHMIDT, Philadelphia.
Discussion to be opened by GEORGE M. DORRANCE, Philadelphia.

Friday, May 20—2 p. m.

Election of Officers

The Effect of Roentgen Rays on the Heart. A. S. WARTHIN and E. A. POHLE, Ann Arbor, Mich.
Discussion to be opened by B. H. ORNDOFF, Chicago.

Standards in Roentgenology. P. M. HICKEY, Ann Arbor, Mich.
Discussion to be opened by JAMES T. CASE, Battle Creek, Mich.

The Metamorphosis of Tuberculous Lung Changes as Observed in Serial Roentgenograms (Lantern Demonstration). F. S. BISSELL, Minneapolis.
Discussion to be opened by WILLIS F. MANGES, Philadelphia.

Basal Tuberculous Lesions. V. V. NORTON, Cincinnati.
Discussion to be opened by H. K. PANCOAST, Philadelphia.

Lateral Views of Thorax (Lantern Demonstration). SAMUEL BROWN and H. B. WEISS, Cincinnati.
Discussion to be opened by W. A. EVANS, Detroit.

Intraperitoneal Insertion of Capillary Tubes of Radon in Cancer of the Abdomen and Pelvic Cavities. ISAAC LEVIN, New York.
Discussion to be opened by FRANK C. YEOMANS, New York.

THE TECHNICAL EXHIBITS

Some day, perhaps, factories of all sorts will make just such merchandise as their consumers need, and will operate by consulting the clients at every step. But at present the field of medical supplies is far ahead of most manufacturers in such cooperative effort. The laboratory man, the instrument maker, the medical publisher, watch the progress of science to such purpose that they are just one step behind the practitioner in an effort to tackle his problems.

A visit to the Exhibit Halls will disclose an exhaustive group of books, pharmaceuticals, surgical dressing and office equipment; tested infant and invalid foods put up in a variety of convenient forms; instruments of delicate precision, following close on the surgeon's expressed desire for new tools; and elaborate electrical and diagnostic apparatus involving fine engineering skill.

Doctors are more than welcome to visit this vast treasure-house of medical helps. Essentially it is to be an exposition and not a sales room. Visitors will not be unduly urged to make purchases. Therefore every one should feel entirely free to visit every exhibit and ask questions or seek information. In other words, the exhibits as a whole constitute one of the educational features of the Convention. Here may be found instruments or reference works for which the visitor has long been looking and which it would take considerable search to locate elsewhere.

The exhibits will occupy three floors, accessibly arranged and adjacent to the lecture and motion picture hall. It will be possible to spend time profitably there between sessions. By checking the complete list of exhibitors or the individual exhibit descriptions on the succeeding pages, the visitor may insure himself against missing anything he particularly wants to see. The descriptions are not complete, as some firms did not supply information before time of going to press. However, they are a representative account of what the visitor will find. Even to those familiar with the best in equipment, the exhibit will be a revelation of the pains taken by the manufacturer to give physicians and surgeons adequate service and support.

WILL C. BRAUN, Business Manager.

APPARATUS

This group will show a versatile assortment of up-to-date appliances in both hospital and office styles. A good knowledge of the completeness and efficiency of available equipment as gained by a study of the exhibits will often prove that it is not always necessary to invest heavily to secure the most desired apparatus for a particular office or clinic.

Two tables just perfected by the W. D. Allison Company, Indianapolis, will be shown in Booths 14 and 62. They will also have many other models of the Allison Tables on display. As is well known, the Allison line represents a distinctive idea in table designing and it will therefore be well worth while to inspect this large exhibit.

A complete, self-contained instrument for the refraction of the eye with a battery of lenses for each eye—built on entirely new principles—is to be shown by the American Optical Company in Spaces 348, 349 (Mezzanine). This new "Wellsworth Phoroptor" has a wider range of powers than an ordinary trial case, increased by eighth-diopters—allowing for the finest adjustment.

One of the Junior Surgeon Office outfits will be shown in Booth 317 (Mezzanine) by the American Sterilizer Company. Its various features—"steam-locked" door, etc., will be demonstrated by attendants. They will be glad to explain how it brings hospital sterilizing procedure to the physician's office.

A blood pressure instrument (the Baumanometer) exhibited by the W. A. Baum Co., which has reached a production of over 50,000, is to be shown in the new models at Booth 206. The advantages of the glass cartridge tube, which has no cemented joints and can be removed, cleaned and replaced in a few moments without tools, will be explained in full detail.

Scientific instruments, including the Colorimeter, Hemoglobinometer, Haemacytometer and the complete Diagnostic Set will be found in Spaces 13 and 15, the section devoted to the Bausch and Lomb Co. A new feature will be the Feree Rand Perimeter with facilities for pre-exposure, particularly important when taking color fields. Complete literature on this interesting subject will be available.

Two portable floor stand models of the Scialytic (Shadowless) Operating Light are to be exhibited by the American and Canadian distributors of this French product, the B. B. T. Corporation of America at Booth 317 (Mezzanine). Visitors will be interested to note that these Scialytic Lights embody the same principles of light diffusion and reflection as found in the larger models.

The new perfected Electrocardiograph of G. Boulitte & Company will be featured in Booth 301 (Mezzanine). Here a complete line of modern diagnostic instruments including the Pachon Oscillometer will also be on view. Owners of Boulitte apparatus will receive helpful service suggestions. This exhibit will be arranged by Albert C. Gaudin of New York, American agent for Boulitte apparatus.

A new Electrocardiograph will be featured in a portable model this year by the Cambridge Instrument Co. It was designed by Dr. Williams of Columbia University and will extend the field of usefulness of the electrocardiograph. There will be demonstrations of this instrument at Space 307 on the mezzanine, and also of the Hindle Electrocardiograph, the Polygraph, Microtome, Alveolar Air Indicator and other physiologic research instruments.

Metabolism and oxygen apparatus will be exhibited in Booth 54 by Warren E. Collins. The metabolism apparatus is the Benedict-Roth, embodying the original principles of construction established in 1922. The oxygen apparatus is a new and recent development for the treatment of pneumonia as devised by Dr. Roth of the Battle Creek Sanitarium and Dr. Barach of the Presbyterian Hospital in New York City. Information as to technic, etc., will be gladly supplied to visitors.

A complete line of personal weighing and measuring equipment will make up the exhibit of the Continental Scale Works of Chicago in Space 22. Here you may examine at your leisure the modern types of weighing equipment in which you are particularly interested, or discuss your school and clinic weighing problems with the attendant who will be ready to assist at all times in the section of proper equipment.

The various ways in which photography can be of use to the doctor and the hospital will be shown by the Eastman Kodak Co., in Booths 23, 25 and 27. Films and accessories for roentgenology, clinical photographs made with simple equipment and medical motion pictures will all be featured. The Medical Division of the Eastman Co. will have able representatives at this exhibit.

The various models of the Metric Gas Machine manufactured by the Foregger Company, Inc., New York, will be demonstrated in Space 31. They will also show the latest models of the Gwathmey Anesthesia Apparatus for Ethylene and other gases. A cordial invitation is extended to inspect these machines.

The Four A Audiometer, a device used for the group testing of hearing in schools will be exhibited by the Graybar Electric Company, Booth 308 (Mezzanine). Actual demonstrations will be made. There will also be on exhibit two models of the Portable Audiphone, a hearing aid produced by

the Research Department of the Bell Telephone Companies and now ready for general use. The Two A Audiometer for otologists' use in hearing tests will be a part of the exhibit.

Among the equipment exhibited by the Heidbrink Co. at Booth 318 (mezzanine) will be found the perfected model of the "Lundy-Rochester" fourgas machine. This apparatus is built to accommodate nitrous oxide, ethylene, oxygen, carbon-dioxide and ether in any combination desired and its usefulness to the anesthetist will be fully demonstrated.

Surgeons' operating tables with pedestal base adjustable in height to eliminate tiresome stooping will be one of the features of the Kny-Scheerer Corporation in Booths 340, 341, 342, 343 (Mezzanine). They will also show sterilizing apparatus in recessed installations which provides the rapid sterilization of surgical instruments and utensils by high pressure steam and at the same time assures comfortable working conditions in the sterilizing room.

A wide assortment of medical microscopes from a simple monocular type to a research binocular combination instrument will be shown by E. Leitz, Inc., Space 33. The new Apochromatic objectives and the new Bicentric Darkfield Condenser offering a great light transmitting capacity and permitting high resolving power will be demonstrated. Also the Leitz Research Microscope Model "ABM" will be shown for the first time.

The Nichols Nasal Syphon will be exhibited by the Nichols Nasal Syphon Company, Inc., New York, in table space mezzanine floor. Their new booklet, filled with condensed information on the etiology, pathology, symptoms, diagnosis, prognosis and treatment of nasal conditions will be distributed to visitors complimentary.

A feature of the exhibit by George R. Pilling and Son Company in Spaces 215 and 217 will be the Pilling-made bronchoscopic apparatus used by the staffs of the Chevalier Jackson Clinics. Pilling-made splints, Fracture Apparatus, Stethoscopes and Blood Pressure Apparatus will be included. The distinctive improvements of the recently developed suction and pressure pumps will be demonstrated.

Cautery apparatus to be exhibited by the Post Electric Co. at Booth 24 includes a new Minor Duty instrument which works on any electric outlet and accommodates a choice of three interchangeable point units which may be sterilized. The Post Electric Company will also demonstrate their regular line of cautery appliances.

A line of reasonably priced Autoclaves is to be shown by the Prometheus Electric Corporation. Some of their interesting features are the fact that they are built in two sizes and are of sufficient capacity for hospital use and that the installation is easily accomplished, requiring no special piping. The new Quick Boil Sterilizer will also be featured. Space 253 (Lobby).

The latest portable Sanborn Electrocardiograf will be exhibited in Booth 254 (Lobby), by the Sanborn Company. A full line of standard metabolism apparatus will also be included. Among the interesting developments made by this firm for metabolism testing are the White Grafic and the special white enamel transportable table. Demonstrations of Electrocardiograf and Metabolism Apparatus will be given daily. Appointments can be made for complete tests showing all steps in technic and final results.

Two new models of suction and pressure pumps will be displayed by the J. Sklar Mfg. Company. Special features of these machines are heavy duty slow speed motors, making the pumps almost noiseless. Physicians are cordially invited to inspect the various types of these machines which will be shown in both two- and four-cylinder types. Booth 69.

Among the latest articles of their manufacture, C. M. Sorensen Company will show the "De Luxe Equipment" which supplies in one unit practically a complete outfit for the ear, nose and throat specialist. They will also have their anesthesia, pressure and suction outfit for hospital operating rooms on exhibit as well as specialists' chairs and stools. Booth 162.

A number of new instruments will be included in the display of microscopes, microtomes, delineascopes, colorimeters and photomicroscopes by the Spencer Lens Company, Space 29. For the first time they will show a new combination binocular and monocular microscope self contained, which makes it unnecessary to remove either tube to shift from one type of work to the other. Other new instruments will be fork-type substages with fine adjustment for condenser and a new type of rotary microtome.

An instrument which graphically records blood pressure will be shown by the Taylor Instrument Companies in Spaces 17, 19, 21. This is the Tycos Recording Sphygmomanometer. Visitors may have a graphic record made of their blood pressure and presented to them at the exhibit. The new Tycos Cardio-Respiratory apparatus for evaluating the cardiac reserve and for determining vital capacity will be demonstrated. Additional instruments on exhibit will include Tycos Sphygomanometers, Clinical Thermometers, Household Thermometers, Barometers for Basal Metabolism and Urinalysis Glassware.

At Booth 167 the Toledo Technical Appliance Co. is to show the McKesson appliances for anesthesia and basal metabolism, as well as surgical pumps, the artificial larynx and the new oxygen therapy apparatus for asthma, pneumonia, etc. Throat specialists will be interested in the artificial larynx and the oxygen apparatus, which are recent developments in this field. Motion pictures at the booth will illustrate the technic of nitrous oxide-oxygen and ethylene anesthesia in a large variety of operations.

Hot oil sterilization of cutting instruments is attracting much attention, and the Wilmot Castle Co. has prepared for exhibition one of its automatically controlled oil sterilizers, designed to preserve the cutting edge of instruments. Another new sterilizing apparatus perfected by Castle during the last year is an office Autoclave with automatic heat regulation. Combination sterilizers for modern offices, clinics and hospitals will also be featured in the Castle exhibit at Space 9.

The Two-in-One hospital bedside table is to be featured in the display of the Max Wocher and Son Co., makers of hospital and operating tables and equipment. How this piece of furniture combines a regular bedside table used for sundries and flowers with an adjustable food tray which can be dropped when not in use will be demonstrated. This firm will also display one of their Cincinnati Automatic Pedestal Operating tables with a model top, and a new Pneumo-Thorax Apparatus on the mezzanine floor at Booths 338 and 339.

New models of microscopes will be demonstrated at Booth 68 by Carl Zeiss, Incorporated. New features include Inclined Binocular attachment for Monobjective Microscopes, Improved Dark Ground Condensers, etc. A collection of popular instruments for ophthalmic work comprising microscopes after Gullstrand; Slitlamp Attachments, U. V. Radiation Lamps, etc., will be shown.

BOOKS

Here you can see and examine at your leisure practically the entire line of surgical and medical books of the foremost publishers in the professional field. You can supply yourself on the spot with a season's reading, or make notes of interesting works to be ordered at your leisure.

The majority of their medical publications will be shown by D. Appleton Company in their exhibit in Space 101. They have directed their particular attention to the production of subjects covered in monographic form. There will be an exhibition of monographs on pediatrics, on gynecology and on surgery, together with new editions and other new books. Particular interest will be attached to MacDowall's "Clinical Physiology" and Barton and Yater's "Symptom Diagnosis"; both of which are 1927 publications.

A number of interesting features have been prepared especially for the Convention by P. Blakiston's Son & Co. Blakiston's have published 54 new books or new editions in recent months. There will be something of interest for the specialist as well as the general practitioner. Representatives will be present to greet friends and make new acquaintances. Booth 2.

Among the various books to be shown in Booth 203 by F. A. Davis & Co. are Strickler's "Diseases of the Skin and Syphilis"; Kennedy's "Practical Surgery of the Joseph Price Hospital"; new revised editions of Bassler's "Diseases of the Stomach and Upper Alimentary Tract" and "Diseases of the Intestines and Lower Alimentary Tract Including the Liver, Pancreas and Gall Bladder"; Ball's "Modern Ophthalmology" in two handsomely illustrated royal octavo volumes; Einhorn's "On the Duodenal Tube." And the most interesting of all, the new 10th thoroughly revised edition of Sajous' "Cyclopedia of Practical Medicine" in eight large Royal Octavo volumes.

In their exhibit, Spaces 151-200, Paul B. Hoeber, Inc., will show advance copies of three important books—Cowdry's "Special Cytology," 2 volumes, by forty authors; Young & Waters' "Urological Roentgenology," a book unusually complete and with exceptional illustrations; and Tilney's "Brain from Ape to Man," a book which is the result of ten years' study in comparative anatomy and is a distinct contribution to the study of evolution.

A goodly array of recent works will be shown by Lea & Febiger in Space 150. Their exhibit will include the following 1927 books: Ormsby, "Diseases of the Skin"; Aaron, "Diseases of the Digestive Organs"; Osler's "Modern Medicine"; Fitch, "Mineral Waters of the U. S."; Thornton's "Materia Medica"; Kilduffe, "Blood Chemistry"; Du Bois' "Basal Metabolism"; Fones' "Mouth Hygiene"; Polak's "Gynecology"; Trudeau, "Foundation Studies"; Simon's "Chemistry"; Warren, "Medical Science for Everyday Use"; Treves' "Surgical Applied Anatomy"; Norris, "Blood Pressure"; Culbreth's "Materia Medica"; Levine's "Practical Otology"; Price's "Hygiene and Sanitation"; Martin & Weymouth's "Elements of Physiology."

A special exhibit of important new publications of timely interest has been arranged by J. B. Lippincott Co. It will occupy Space 63. New titles to be displayed are: Davis' "Applied Anatomy"; New Edition, Montague's monograph on "Hemorrhoids"; Spencer's "Laryngeal Tuberculosis"; Addison Edition of "Piersol's Histology"; La Wall's "Four Thousand Years of Pharmacy"; Karsner's "Text-Book of Pathology"; Craig's "Parasitic Protozoa of Man"; Foote's "Diseases of the New-Born"; Henderson's new translation of Meyer and Gottlieb's "Experimental Pharmacology"; Bailey and Cushing's "Classification of the Tumors of the Glioma Group"; the new printing of Spalteholz's "Anatomy"; the Third Edition of Dennett's "Simplified Infant Feeding."

Books that are scarce or out of print will be a special feature of the exhibit by Login Brothers, of Chicago, in Space 263 (Lobby). These include Osler's "Alabama Student"; Osler's "Angina Pectoris"; Osler's Abdominal Tumors"; Osler's "Medicine," 1st edition; Laennec's "Disease of Chest," 1835; Landolt's "Refraction and Accommodation of Eye"; Macewen's "Pyogenic Infective Diseases of Brain and Spinal Cord"; Gould-Pyle's "Anomalies and Curiosities of Medicine"; Engelmann's "Labor Among Primitive Peoples"; 3 volumes Dalton; Brain Sections; Joannis Schroderi; Ars Medica Dogmatico-Hermetica Francofurti, 1648; Rieder-Delepine; Atlas Urinary Sediments; and all Saunders Out of Print Medical Atlases.

The wide range of medical knowledge, general, special and cultural, will be reflected in new Macmillan books on display at Washington. The pediatrician will find his field well represented in a new Macmillan publication; the neurologist and psychologist will have reason to linger long at Booth 3 as well as the dermatologist, the internist and the general practitioner. Ask specifically to see Lucas' "Modern Practice of Pediatrics"; Elwyn's "Nephritis"; Head's "Aphasia"; the new edition of Sequeira's "Diseases of the Skin"; and Feinblatt's "Transfusion of Blood," from among the many titles on display.

Among the new books on display by C. V. Mosby Company, Space 50, will be: Jacobi's "Dermachromes"; Bing's "Regional Diagnosis"; Hajek's "Nasal Accessory Sinuses"; Hertzler's "Minor Surgery"; Duval's "Duodenum"; Murray's "Examination of the Patient"; Ryall's "Operative Cystoscopy"; Bertwistle & Shenton's "Atlas of Visceral Radiograms" and many other new books and new editions. The exhibit will be a complete showing of the Mosby medical and surgical books.

Some 250 titles will be shown by W. B. Saunders Company, Booths 51 and 100. Here you may inspect many new books and new editions including Cecil's "Text-Book of Medicine"; Ford's "Bacteriology"; Wechsler's "Clinical Neurology"; Young's "Practice of Urology"; Rehfuss' "Diagnosis and Treatment of Diseases of the Stomach"; Crohn's "Diseases of the Stomach"; Wood and Rowell's "Health Supervision and Medical Inspection of Schools"; the new Mayo Clinic Volume; Kolmer's "Chemotherapy"; Stokes' "Clinical Syphilology"; and entirely rewritten edition of Griffith and Mitchell's "Pediatrics"; Morse's "Pediatrics"; Arny's "Pharmacy" and Sollmann's "Pharmacology," both revised in accordance with the new Pharmacopeia; 10th edition of Scudder's "Fractures"; 2nd edition of Stevens' "Practice of Medicine."

An interesting exhibit by William Wood & Company will be found in the lobby, Space 257 (Lobby) between the entrance doors to the scientific exhibits. Copies of the latest editions of their many standard works will be there for examination and also about 30 entirely new books on a wide variety of medical and surgical subjects.

FOODS FOR INFANTS AND INVALIDS

Manufacturers of standard foods are turning their attention more than ever to the making of special preparations for diabetics, malnutrition cases, infants and convalescents. It is a distinct satisfaction to be able to prescribe attractive yet efficient menus in place of the old-fashioned "invalid dishes." A large group of these products will be on display.

The quick solubility and assimilative qualities of the new Baby Sugar of the Borcherdt Malt Extract Company will be demonstrated in Booth 20. This malt sugar will be of rather unusual interest to all physicians, since it carries a maltose content of 87 per cent. The Borcherdt Malt and Cod Liver Oil products will also be exhibited. Provision will be made for registering those physicians who wish to keep in touch with the Borcherdt preparations.

A number of marked improvements have been made in the nutritional qualities of the special dry milk, Dryco, and of Protolac, the calcium caseinate manufactured by the Dry Milk Company, New York. These improvements will be demonstrated for the first time. General practitioners and pediatricians are cordially invited to pay this exhibit a visit. A worth while souvenir will be presented to each visitor. Booths 16 and 18.

The desirable qualities which milk from Holstein cows possesses for infant feeding will be demonstrated and explained by the Extension Service of the Holstein Friesian Association of America. They will have a milk booth on the mezzanine floor just opposite the west stairway to the motion picture theater. An interesting booklet "Holstein Milk and What the Doctors Say" has been prepared and will be distributed from the booth.

The serving of Horlick's, the original malted milk, at Spaces 57 and 59, will be one of the pleasant features of the exhibits. Visitors will find that the Horlick Corporation is introducing its Maltose Dextrin Milk Modifier in which members of the medical profession have already shown considerable interest. Samples and souvenirs will be presented.

Doctors who are interested in the use of cereals in both normal and special diets are invited to call at Booth 335 and 336 on the mezzanine. Here the Kellogg Company of Battle Creek, Mich., will have an exhibit of cereals and will serve tea and All-Bran muffins every afternoon.

Recent discoveries of the value of gelatine in the dietary will be portrayed by the Knox Gelatine exhibit, Spaces 70 and 72. One of the most interesting features will be demonstration of how Knox Gelatine may be used to end the monotony of the breakfast diet. Another will be the use of Knox Gelatine as a protective colloid in the milk for infant feeding. In addition to these scientific features the Knox display will also include an exhibit of alluring and wholesome desserts, salads and candies which may be sampled freely as an example of how the finicky appetite may be aroused or the hearty hunger appeased.

The value of S. M. A. in infant feeding will be featured by the Laboratory Products Company in Spaces 64 and 66. Representatives present will discuss infant feeding problems and be glad to explain the soundness of the nutritional principles embodied in S. M. A. A motion picture demonstrating the method of manufacture of S. M. A. and salient points regarding its use will be shown.

There will be an exhibit of Mead's Infant Diet Materials on the Main Floor Auditorium and a special scientific exhibit in the Auditorium Lobby. The former, occupying Booths 71-73, will include Mead's Dextri-Maltose, Mead's Casec, Mead's Recolac, Mead's Powdered Acid Milk and Mead's Powdered Whole Milk. In the Lobby, Booth 255, will be shown a miniature Cod Liver Oil factory, mounted codfish, and kindred species of the Gadus family.

The outstanding points in regard to the composition, digestibility and assimilability of Mellin's Food will be demonstrated by the Mellin's Food Company in Spaces 205 and 207. They will offer physicians an opportunity for personal discussion of the various ways in which

Mellin's may be used as a [illegible] milk in both infant and ad[illegible]ing.

Six qualified representatives of the Merrell-Soule Company will be ready at all times to discuss the application of the Merrell-Soule group of products in infant feeding and the adult diet. The Merrell-Soule system of dehydration will be shown by motion pictures. Klim will be served and Merrell-Soule Powdered Whole Lactic Acid Milk and Merrell-Soule Powdered Protein Milk demonstrated. The exhibit will occupy Booths 209, 211, 213.

A unique electrically illuminated model of their milk powdering plant will be shown by Moores & Ross, Incorporated, dietetic laboratories, Columbus, Ohio. This will be a part of the display of their two infant feeding products, Similac and Powdered Whole Milk. All moving parts of the plant will be shown in the process of reducing liquid milk to a powder. A visit to this booth will be interesting and profitable. Space 331 on the mezzanine floor.

INSTRUMENTS AND SUPPLIES

Quite a part of the floor space will be devoted to instruments for the general practitioner, the surgeon, otolaryngologist and obstetrician. Here will be displayed many of the newer variations and refinements of such equipment, as well as makes of time-tried reputation. If your hand recognizes the feel of a master needle or a well-built splint, or your eye delights in an accurate thermometer or precise syringe, you will find much to admire in this comprehensive section.

In addition to a display of the new patterns of surgical instruments and operating tables, the A. S. Aloe Company will show in Spaces 314 and 315 (Mezzanine) Physio-Therapy Apparatus. A special demonstration exhibit will show the exact action of the diathermy current and the result of diathermy currents passing through the body.

At Booth 204 will be found the exhibit of C. R. Bard, Inc., 79 Madison Avenue, New York City. Their interesting line of Urological Instruments, manufactured by Eynard of Paris, will merit the visit of any member interested in Cystoscopy, Prostatectomy or general G-U work. New devices to be shown for the first time at any convention include the Welland Howard Spiral Stone Dislodger, the Gardner Modification of the Beer Suprapubic Cup, a Diverticulite, and a new Incisory Electrode.

An interesting assortment of their products including some newer features such as the Armored B-D Manometer, Erusto Needles (The Needle That Never Rusts), Sana-lok Syringes, etc., will be shown in Spaces 108, 108 and 110 by Becton, Dickinson & Company.

The exhibit of the Frank S. Betz Company will combine some new and interesting pieces of "WhiteKraft" Steel Furniture, a very complete line of surgical instruments and sundries, together with a special exhibit of genuine leather bags and medicine cases. Special souvenirs have been arranged for visiting physician. Spaces 75-77-174-176.

New ideas in proctoscopy, urethroscopy, ophthalmoscopy, otoscopy and rhinoscopy will be demonstrated at Spaces 177 and 201—Cameron's Surgical Specialty Company of Chicago. Every member of the profession whether a user of the Electro-Diagnostoset or not will be interested in the new additions to Cameron's Equipment for the better practice of medicine and surgery.

How Cellosilk may advantageously replace oiled silk, muslin, rubber tissue at a great saving in cost will be explained in Booth 258 (Lobby). Its advantages such as sterilizing qualities, nonadherence, flexibility, toughness and transparency, will be demonstrated by men from the scientific department of the Cellosilk Manufacturing Company.

Cilkloid Surgical Dressings prepared by The Cilkloid Company of Marshalltown, Iowa, may be examined in Booth 351 on the mezzanine floor. Attendants will be present to discuss the uses and advantages of the Perforated form as nonadherent dressings for ulcers, skin grafts and all granulating wounds.

Thirty years ago, Revra DePuy conceived the idea that it would be a great convenience to the physician to have a ready made appliance that would be available for different fractures. The DePuy Manufacturing Company have demonstrated the success of this idea and will show in their exhibit their splint which adapts itself to any case and yet is transparent to the x-ray. This display will be on the mezzanine floor, New York Avenue side opposite stairway to motion picture theater.

The complete Cook line of syringes, needles, and "CARPULES" will be exhibited by the Cook Laboratories in Space 333 (Mezzanine). Among new developments are the tonsillectomy syringe and needles and the Cook syringe for intravenous injections. The physician will also be interested in the complete hypodermic outfits for emergency use.

A complete line of Nose and Throat Sprays, Nebulizers, Steam Vaporizers, etc., for office and prescription purposes will be displayed by the DeVilbiss Company in Booth 250 (Lobby).

The mammoth X-Acto Syringe (2,000 cc. capacity) will again appear at the Technical Exhibits, Space 26, occupied by S. Doniger & Company Inc. Krome Plate Rust-Resisting Instruments will form the center of this display. By means of the Salt Water Spray Test the relatively longer life of this type of instrument will be demonstrated. The firm also hopes to have ready for this exhibit the new X-Acto Rustless Steel Hypodermic Needle.

In the display of the Electro Surgical Instrument Company will be found an innovation in cystoscope construction, a product originating from the research of Dr. David M. Davis, the chief of the Urological Department of the University of Rochester Medical School, and former associate in Urology at Johns Hopkins Medical School and Hospital. In this cystoscope the sheath has both anterior and posterior openings permitting use either as convex or concave cystoscope. The Electro Surgical Instrument Company exhibit will embrace practically every electrically lighted surgical instrument demanded for hospital and bedside use. Space 11.

At Spaces 103 and 152 the Kloman Instrument Company of Washington will take great pleasure in greeting old customers in their home town and making the acquaintance of many new ones. Among the new things to be shown is a sterilizer, which sterilizes by means of gas and formaldehyde. Dr. Sharrett's Sinus Suction Apparatus, Scannell Transfusion Apparatus and many more new things of interest will be included.

Their standard line of Vim Firth Stainless Steel Needles, Vim Emerald Luer Syringes, together with numerous Vim specialties such as Vim Tonsil Syringes, the Scannell Apparatus for the transfusion of whole blood, the Dunn outfit for local anesthesia will be shown in Space 327 (Mezzanine) by the MacGregor Instrument Company, Needham, Mass. A new item will be the Vim Electric Breast Pump as designed by Dr. Woodard Colby.

A suturing instrument that embodies in one unit a needle threader, suture scissors, needle forceps and miniature tanks for sterile sutures and for ethyl chloride will be shown by the Marbel Blood Calculator Company. This device, the Everready Suturer, will have as company the Marbel Blood Calculator. Demonstrations of how the latter eliminates tedious computations will be given in the exhibit—Space 260 (Lobby).

Physicians are cordially invited to the booth of the Massillon Rubber Co. to inspect their Surgeon's Rubber Gloves. Valuable information may be secured from their representatives as to the proper care of rubber gloves, drainage tubing, etc. Souvenirs for everybody. Space 324. (Mezzanine).

A large number of new eye, ear, nose and throat instruments and apparatus will be on display at the E. B. Meyrowitz Surgical Instrument Company's exhibit, Space 154. In the interests of the eye men especially there will be the following: A new set of eye test charts by Prof. Blaskovics, Beebe Magnifier in its new adjustable form, Berens Needle Holder, Jameson's Muscle Forceps, Meyrowitz latest model Trial Frame, Giant Ophthalmoscope, etc. In the interests of the ear, nose and throat men, there will be many of the Meyrowitz instruments as well as the Reiner models.

Many changes have been made in operative technic during the past year, and with them have come modified and new types of surgical instruments. V. Mueller & Co., of Chicago, will display in Booths 105, 107, 109 a complete line of modern instruments and operating room accessories, such as illuminators, surgical engines, ether and vacuum apparatus, eye magnets, etc. Every branch of surgery will be represented and the diagnostician will also find much of interest.

New anatomical specimens and teaching material; latest ear, nose and throat instruments; specialties for plastic surgery and nasal correction will be featured by Pfau's American Instru-

ment Company. Special items of interest will be: Set of specimens showing Dr. Halle's various sinus operations and different kinds of mastoid operations; tanned nose specimen with movable septum and with new arrangement of the sections; and Atkinson's latest Directoscope; Space 106.

The exhibit of the "Eveready" Universal Fracture Appliances by J. R. Siebrandt Mfg. Company, Space 332 (Mezzanine) will contain some very distinct new features. Of special interest will be the new improved aluminum built Arm Splint, which is lighter in weight than before, while its application is more simplified. The Balkan Frame and Leg Splint also have some newly added features not shown before.

In Booth 69, the George Tiemann Company will exhibit their line of instruments including many new specialties among which will be the Berens Iridocapsulotomy Scissors and Punch; the Lilienthal Rib Guillotine; Hibb's Spinal Fusion instruments; Imperatori nasal aspirators; the improved Unger Transfusion apparatus; the Pfarre two-way syringe, and a variety of instruments made from rustless steel and also chromium plated instruments. Several new types of operating and therapeutic lights will be on display, and registration will be taken for our Centennial catalogue.

A new and improved line of splints will be exhibited by the Zimmer Manufacturing Company in Booths 304 and 305 (Mezzanine). Mr. Zimmer and Dr. Lytle will be in charge and will be pleased to demonstrate the many advantages which are incorporated in the line. The improved cross for clavicle fractures, a new colles splint and the new aluminum leg splint will be of interest.

PHARMACEUTICALS AND BIOLOGICALS

Laboratories and manufacturers will assemble for this showing an almost complete "pharmacy" of the current developments in medical products. In many cases elaborate exhibits emphasizing manufacturing processes and source materials will be installed. The story that lies behind a package of modern pharmaceutical products will be told and the men who make medicaments will be on hand to meet the men who use them.

Chemistry as applied to medicine is attracting special attention. Interest has spread from scientists and investigators to physicians and surgeons on the firing line who are applying research ideas in actual practice. Among the medicinal products of note to be demonstrated in the exhibit of the Abbott Laboratories are Anesthesin, Ephedrine, Neutral Acriflavine, Neocinchophen, Butyn, Amidopyrine, Butesin Picrate, Chlorazene, Procaine and Metaphen. Space 5.

A very interesting display of raw material of animal origin from which finished products of known therapeutic activity are derived will be made by The Armour and Company Laboratory. They will also have on exhibit some highly purified enzymes, which are entirely new. These exhibits will be in Space 8.

Lacto-Dextrin, for changing the intestinal flora, will be one of the very interesting exhibits at the Convention. It will be shown by the Battle Creek Food Company booth featuring Sanitarium products, in Space 334 (Mezzanine). A special demonstration will be given on this product with samples and literature for interested visitors.

The new Saf-T-top Ampoules containing either mercurochrome or iodine will be demonstrated in Space 347 (Mezzanine) by Robert A. Bernhard. Attendants will show the ease with which these solutions may be applied externally and the safety with which they may be carried in bags, kits or even in one's pocket. Samples will be distributed while they last.

The Commission of Standardization of Biological Stains, Space 256 (Lobby) will exhibit samples of all stains which have been certified, with brief explanations of their uses. Various blood stains will be demonstrated by microscopic preparations showing ordinary blood films, trypanosomes in blood, tissue sections, pernicious anemia or sprue films, malarial organisms in blood, etc. Further microscopic preparations will illustrate the use of some of the fat stains.

Hay fever treatment sets will be featured by the Cutter Laboratory exhibit, Space 65. A great deal of information on pollen sensitization and the problems connected therewith may be gained by visiting this booth.

Particular interest will be centered on the D. R. L. exhibit this year as several of the newer products now being used in syphilis therapy will be demonstrated, e. g., Potassium Bismuth Tartrate and Acetarsone. In addition to these latter day items, the well known brands of D. R. L. Arsphenamine, Neoarsphenamine and Sulpharsphenamine will be shown. Also, the new mercurial germicide, "Metaphen," which is attracting so much attention at the present time. Space 7.

The interesting feature of the Deshell Laboratories exhibit will be the method by which they will show the differences between the Petrolagar emulsification and plain mineral oil. In other words, they will answer the question which many physicians have asked, "Why an emulsion?" and will endeavor to show definitely that an emulsification of mineral oil is a better lubricant because of its greater miscibility with the fecal content. Space 261 (Lobby).

The active principle of Sandalwood Oil as exhibited in Arheol and Riodine, organic Iodine will be presented by the P. Astier Laboratories of Paris in Booth 309 (Mezzanine). The A. Lumiere Laboratories of Lyons also will exhibit at this booth Tulle Gras, a wide mesh, non-adhering, surgical dressing, and their recent product, Cryogenine.

The new Hormo Dehydrated Culture Media will be demonstrated by the Gradwohl Laboratories of St. Louis, Space 310 (Mezzanine). Special delineascope demonstration of gonococci and other organisms in colors, showing colonies, etc., will be featured. They will also show a new Hydrogen Ion Comparator Box.

A new and interesting laxative substance known as Isacen will be exhibited and sampled for the first time at Booth 156-158, by the Hoffman-La Roche Chemical Works of New York. Here will also be found the well known Roche Specialties, Digalen, Pantopon, Thiocol Syrup, Iodostarine Tablets, etc., liberal donations of which will be made to members of the profession.

Mercurochrome in the various packages in which it is regularly offered by Hynson, Westcott & Dunning, is to be on exhibit at Booths 10-58. Comprehensive information in regard to this germicide will be available, as will data on the other pharmaceutical specialties of this firm and on their diagnostic apparatus and agents.

The LaMotte Chemical Products Company, Space 312 (Mezzanine) will exhibit a complete line of Hydrogen Ion indicators and equipment. The Hydrogen Ion Testing Sets will be of particular interest to bacteriologists and pathologists, as tests can be made on a single drop of material.

Pollen Antigens (Lederle) for Hay Fever will be an important feature of the exhibit by the Lederle Antitoxin Laboratories, Space 214. Tincture of Digitalis, standardized by the cat method of Hatcher, and Pituitary Extract, the strength of which is designated in units according to the International Conference on Biological Products, will also be featured as well as Serums, Antitoxins and Vaccines.

Biologicals, Ephedrine Sulphate and Insulin will be embraced in the exhibit of Eli Lilly and Company, Spaces 76-79. The Biological display will consist of a representative line of the standard antitoxins and the approved vaccines. The Ephedrine display will show the crude drug source, illustrate certain manufacturing processes and include the finished therapeutic products as offered by Eli Lilly and Company. The main features of the Insulin display will be specimens showing certain stages of manufacture, charts illustrating the effects of Insulin, with many photographs of patients under the Insulin treatment.

The exhibit of The Maltbie Chemical Co., Spaces 12-60, will center around Calcreose, the well known creosote compound. Representatives of the Maltbie Company will explain how the loose chemical combination of creosote with hydrated calcium oxide largely overcomes the gastric disturbance usually associated with the administration of plain creosote or combinations of creosote.

The various Maltine compounds, as well as the materials, such as Malt, Cascara Sagrada, Medicinal Cod Liver Oil, Yerba Santa, etc., that enter into their manufacture will be on display by the Maltine Company, at left of main entrance, ground floor. The Company's representatives in attendance will be pleased to supply physicians with visiting lists and sets of memorandum books.

As Cod Liver Oil is gaining in popularity from day to day, more physicians than ever are interested in this subject. At Spaces 155-157 the E. L. Patch Company will display Patch's Flavored Cod Liver Oil. Here you may obtain first hand information regarding the manufacture and testing of this product, from men who are familiar with every step of the process. If you have never seen a cod's liver or even a real codfish you will find them both on display at the Patch Company exhibit.

A comprehensive showing of Agar-Agar will be made by the Reinschild Chemical Company in Booth 326 (Mezzanine). The various uses and applications of Agar-Agar to the work of the physician will be gladly explained. A cordial invitation is extended to physicians to view the exhibit.

Something interesting in laxatives will be featured by Richards, Incorporated, in their Psyllium Seed. This seed contains within its thin, porous shell a large amount of a mucilaginous substance which, upon contact with water, it discharges. Its action within the alimentary canal will be fully explained. North half of Space 20.

A large, attractive booth will be used by E. R. Squibb & Sons for the display of Erysipelas Antitoxin, Authorized Scarlet Fever Products and other Biological Preparations, as well as Ipral, Insulin, Cod Liver Oil and Arsphenamines. An adequate number of Squibb representatives will be in atttendance at all times to answer questions and explain the value of products which are of particular interest to you. Spaces 53, 55, 102 and 104.

Pollen Extracts in concentrated form and in conveniently diluted doses for the treatment of hay-fever will be featured by the Swan-Myers Company of Indianapolis in Space 251 (Lobby). The display material will be so arranged as to give physicians accurate and concise botanical information about the hay-fever plants that are found in their particular communities. Mr. O. C. Durham, the chief botanist, will be in attendance to explain the pollen surveys that have been made during the past year and to offer suggestions to those who wish to conduct such surveys.

X-RAY AND ELECTRO-THERAPEUTICS

Some of the most impressive advances in modern science have been in the application of electric current to therapeutic uses and the handling of this current with ease, efficiency and safety. In the field of roentgenology especially, in both diagnostic and curative work, enormous advances are made from year to year. The equipment on display in these exhibits comes from firms many of which maintain research departments and extensive medical contacts.

Four new light therapy modalities placed on the market since Jan. 1, 1927, will feature the exhibit of the Burdick Corporation, Spaces 173 and 222. They are the Standard Air-Cooled Quartz Lamp; a Portable Self-Contained Combination Unit (Air and Water-Cooled Quartz Lamps); the special Zoalite, the Z-12, and the Prescription Zoalite Model (the Z-8).

A line of x-ray supplies which will include the Buck X-Ray Film as well as other new and improved items will be featured by the Buck X-Ograph Company of St. Louis. The exhibit will occupy Spaces 322 and 323 (Mezzanine).

Several models of the nonburning Ultra Sun Lamp (impregnated carbon arc) will be exhibited by the C. P. Chemical and Drug Company, Inc. The exhibit will occupy Booth 329 (mezzanine). A handsome new Table Type will be shown for the first time.

A complete line of physical therapy apparatus and electrodes including a new and powerful diathermy cabinet; a tissue-cutting apparatus; a low voltage and wave current generator will be shown by H. G. Fischer & Co., Inc., Chicago. Other features of interest will be their latest radiant therapy lamp as well as quartz ultraviolet apparatus. A full line of accessories including some new electrodes will be included. Spaces 159 and 208.

Visitors who do their own x-ray work will be interested in the exhibit of The French Screen Company, Booth 330 (Mezzanine). Attendants will be glad to explain the reasons why this screen can be sold with a guarantee and what the guarantee embodies.

A new type A-27 Morse Wave Generator will be exhibited for the first time by the General X-Ray Company of Boston. Its usefulness for delivering the low volt currents of physical therapy will be fully explained. The company has developed a new galvanic faradic plate. They will also show the Audotor, an instrument developed for the correction of defective hearing. This exhibit will be found in Spaces 229 on the ground floor and 344 and 345 on the mezzanine floor.

A new infra-red unit with unique features will be shown by Gish-Fortney Co., Louisville, Ky. At this booth, number 346 (Mezzanine), there will be given some interesting details relative to infra-red energy for therapeutic purposes. Spectrographic considerations and definite physical demonstrations will be presented by attendants.

In Booths 153-202 the Hanovia Co. will exhibit their standard Alpine Sun and Kromayer Lamps, the Luxor model of the Alpine Sun Lamp, the Portable Units of the Alpine Sun and Kromayer Lamps, and the newly adapted appearance of the Portable, Self-Contained Kromayer Lamp, constructed to take care of all the known clinical needs of Ultraviolet Light. Members of the Hanovia Staff will be on hand to furnish any information.

Physical Therapy will be the feature of the Harold Surgical Corporation in Booths 306 and 337 (Mezzanine). The Tropico Sun Lamp, a new twin carbon arc ultraviolet light generator will be presented. They will also display the Bierman Hemorrhoid Clamp, an instrument for making hemorrhoidectomy a bloodless office procedure, and the Multotherm, a diathermy apparatus.

The newly developed "Hy-Volt" High Frequency apparatus will be of particular interest to those who visit the exhibit of the High Tension Company in Space 171. The design of this new apparatus is somewhat radical both electrically and mechanically. The "Standard Junior" High Frequency machine will be on display with the "Portable" High Frequency apparatus.

A premier showing of the Keleket Diathermy Apparatus will be a feature of the exhibit by the Kelley-Koett Mfg. Company of Covington, Ky, in Space 231. One of the innovations brought forth by this company is the "Resogap" feature of the Cabinet Model Diathermy Machine. This unit permits the equipment to be in direct resonance for all operating conditions. Further improvements in chest radiographic apparatus are also to be shown.

Important contributions to physical therapeutical and x-ray equipment will be exhibited in Spaces 111 and 160 by the Liebel-Flarsheim Company, Cincinnati. Among these will be the L-F Treatment Timer, which enables the physical and x-ray therapist to attain accuracy in timing treatments. The well known diathermy machine, the Dynelectron; the Electric Scalpel, which opens new possibilities in electro-surgery; the Raysun Generator, for radiant heat treatments; the Air-O-Vac, compressed air and vacuum unit, and L-F X-Ray Equipment will also be shown.

Modern Physical Therapy Equipment is to be represented in the exhibit of the McIntosh Electrical Corporation of Chicago. The New Polysine Generator and the new McIntosh Model Alpine Sun Lamp will be the central figures of attraction. An interesting demonstration on the Mercury Vapor Quartz High Frequency Electrodes will be given at intervals in Booths 319-320 (Mezzanine). A unique convention souvenir which will enlighten you in more ways than one has been planned.

The products of the Patterson Screen Company are to be shown in Space 220. This company devotes its entire attention to the manufacture of x-ray screens. They will exhibit the internationally known Patterson Cleanable Intensifying Screen and Patterson Fluoroscopic Screen. In addition there will be shown the Patterson Foreign Body Fluoroscope and the Patterson Operating Fluoroscope.

In Booth 259 in the Auditorium Lobby, the Radiograph-Scope Company will give an advance showing of the new stereoradiographic angle head table for registered technic. The demonstration will show that the correct position with registered angles, when duplicated in stereo, enables one to visualize the sphenoid sinuses, their size, topography and contents as easily and with the same efficiency as the frontal and maxillary sinuses.

A new and unusual series of "Sunlite Baths" and Carbon Arc Lamps for installations for physicians' offices will be displayed by the Sanitarium and Hospital Equipment Company of Battle Creek, Mich. The Mechanical Horse, Oscillo-Manipulator, Vibratory Chair and Electric Light Cabinets are among the other unique appliances to be displayed. Because of the growing inter-

est in physical therapy this exhibit will be well worth careful inspection. It will occupy Booths 161, 163, 165, 210 and 212.

The feature of the Standard X-Ray Company's exhibit in Spaces 225 and 227 will be a New Vertical Cassette Changer of advanced design, possessing several attractive points. Several De-Luxe X-Ray Machines with Double Disc Rectification and with the well known "Safety Winding" Transformers, and also the Standard Roentgenometer, an instrument designed for the direct measurement of x-rays, may be seen.

Several outstanding developments in x-ray and physical therapeutic apparatus will be noted in the exhibit of the Victor X-Ray Corporation. The Serial "Fluorographic" Unit with which a series of radiographs may be made selectively during the fluoroscopic examination, and the Vario-Frequency Diathermy apparatus which permits the selection of exactly the frequency desired, are but typical of the many new devices which will be shown. The Victor Portable Electrocardiograph will be demonstrated daily at the Victor exhibit, Spaces 164, 166, 168, 170, 172.

No note of somberness will be found in the exhibit of the Wappler Electric Company. The display will be brightened by a pleasing color scheme specially devised for the occasion. In their booths, 169 and 218, between Fourth Avenue and Fifth Avenue, may be seen X-Ray Apparatus finished in the new Wappler two-tone gray. The apparatus finished in these colors harmonize with hospital and laboratory surroundings and are exceedingly pleasing to the eye. Medical Diathermy and Surgical Diathermy Apparatus will also be shown.

MISCELLANEOUS

In this group will be found articles which are difficult to classify in any of the above headings, but which, nevertheless, play an important part in the life of the medical man.

"The Making of a Pale Dry Ginger Ale" will be explained and illustrated with moving pictures at the exhibit of Canada Dry Ginger Ale, Inc., from the extraction of the ginger flavor to the placement of the blended beverage in the bottle. There will be an electrical refrigerator which will keep this pleasant drink at a proper temperature for serving, that A. M. A. members and their families may test its qualities. Booths 302, 303 (Mezzanine).

Samples of the little blue Nursery Name Necklace, with its white-lettered beads for spelling out an identification, are to be given away at the exhibit of J. A. Deknatel and Sons, Inc., in Booth 313 (Mezzanine). They will also show the Morgenthaler Bed for premature and feeble babies.

The lady in Louis XVI costume who will preside at Booth 252 in the lobby is a living representative of the French lady who appears in silhouette upon the packages of Armand, maker of cosmetics. There will be a display of the copy which this firm has used in THE JOURNAL OF THE A. M. A., bringing out the distinctive points of their products.

Mechanical supports for maternity, convalescing, postoperative, abdominal, sacro-iliac and orthopedic wear are to be featured by the S. H. Camp Co. They will be demonstrated by experts and a number of specialized models will be shown. Space 67.

The Cantilever Booth (number 74) will show both street and evening models of their shoes in accord with smart styles, but adhering at the same time to the flexible arch, wedged heel and snug instep on which the Cantilever reputation is built. How the flexible arch permits free circulation and strengthening of the arch muscles; how the shape of the shoe conforms to the lines of the normal foot; and how the shoe directs the body weight outwardly are some of the points to be demonstrated.

At Space 178 a replica of the steel corset with a thirteen inch diameter worn in the days of Catherine de Medici will give point to the display of Spencer corsets by Berger Brothers, with their modern interpretation of health principles. They are intended for conditions requiring a mechanical support, and to correct faulty posture. There will also be shown a complete set of pads which the physician may prescribe.

Vita Glass, the new glass which transmits ultraviolet light, will be demonstrated at Booth 320 (Mezzanine). Full explanation will be given of the health value of Vita Glass and information regarding recent installations.

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* Spaces thus marked are located in the lobby of auditorium.

† Spaces thus marked are located on mezzanine.

Correspondence

BLOOD PRESSURE IN THE TROPICS

To the Editor:—In THE JOURNAL, February 5, p. 424, Dr. Edward J. Stieglitz inquired whether the lowered blood pressure found by Cooper and myself in the tropics might not be due to the subjects examined having had a more than normal amount of rest. This factor could scarcely have accounted for the hypotension, as the officers examined led active lives, and, being only transients in the tropics, did not vary their mode of living from that followed in the temperate zone.

LOUIS H. RODDIS, M.D., Guantanamo Bay, Cuba.

"ERROR OF BASING SERUM DIAGNOSIS OF SYPHILIS ON THE KAHN REACTION ALONE"

To the Editor:—A communication from Dr. A. V. Greaves (THE JOURNAL, March 19, p. 945) "serves as an admirable peg on which to hang" a reiteration of certain remarks made in my article entitled "Error of Basing Serum Diagnosis of Syphilis on the Kahn Reaction Alone" (THE JOURNAL, April 24, 1926, p. 1273). Almost a year has elapsed since the publication of the paper, and I am more than ever convinced of the fitness of the title and of the conclusions it contains.

I have always felt that the value of a biologic test must be based on clinical rather than laboratory grounds. My article was therefore based on serologic reports (Kolmer and Kahn tests) to a large syphilitic service by one of the most able and careful of serologists, who knew nothing concerning the patients whose serums were tested. The fifty negative Kahn and Kolmer reactions constitute but a small number of the serums examined monthly in Dr. Schamberg's clinic, in which the study was made.

The serum diagnosis of syphilis is best served, at present, by reporting the results of both reactions on a given serum. Within recent months the following additional facts on which this opinion is based have presented themselves: First, instances of absolute negative Kahn reactions in the presence of clinical syphilis and a strongly positive Kolmer reaction. True, this is exceptional; nevertheless it occurs and is generally admitted (Hopkins and Brunet: THE JOURNAL, January 29, p. 311). Secondly, and perhaps more important, the frequency with which I have received reports of weakly positive Kahn reactions in persons without signs, symptoms or history of syphilis. These are commoner, and because of the concomitant generally negative Wassermann reaction (Kolmer test) can hardly be viewed in any way but with suspicion toward false positivity. I do not mean that the fault lies with the Kahn test. It may be, and in all likelihood is, due to the personal equation entering largely into the reading of this reaction, whereas the end reading of a Wassermann reaction is easier and less likely to error on the part of both the tyro and the experienced in the serology of syphilis. In view of these considerations, how certain can one be that the weakly positive Kahn reactions, not infrequently obtained in treated syphilitics with negative Kolmer reactions, always indicate a higher sensitiveness? Prudence naturally counsels further treatment, but that does not settle the question whether or not the individual still harbors active spirochetic infection.

Were I not convinced that the Kahn test is highly reliable, I would never have felt it a worth while checkmate on the Wassermann reaction. Its simpler, easier and quicker technic makes it a diagnostic method particularly applicable under certain conditions (shipboard, isolated stations). But even then it should at times be checked with a highly sensitive Wassermann reaction. But this does not necessarily indicate that it should be accepted by the rank and file of the profession as the only serum test for syphilis.

In a disease as serious as syphilis, the question of ease and cheapness of performance of a serum test are minor considerations, as is likewise the question of time involved. The importance of the latter from the patient's point of view need be emphasized only in those instances of acute syphilis in which changes in the blood serum carry weight as to the amount of subsequent treatment. With respect to the time of the serologist, that depends on whether he would be testing his own or somebody else's blood serum, and the importance with which he views an infection with *Spirochaeta pallida*. Furthermore, Houghton, Hunter and Cajigas (THE JOURNAL, Dec. 4, 1926, p. 1898), who likewise feel that the Kahn test is a superior method for the serum diagnosis of syphilis, state that the Naval Medical School has abandoned the Kolmer test because of its time-consuming procedures and particularly because it had no advantages over the simpler Wassermann procedures. The Kolmer test has long since passed the probationary period so far as I and many others are concerned. So many investigators have confirmed its high degree of sensitivity and its absolute specificity when correctly conducted as described by Kolmer that this appears settled.

I am still of the opinion that it would be a distinct error for the profession at large to follow the advice and practice of the laboratories of the Michigan Board of Health and of the Medical Department of the U. S. Navy in limiting the serum diagnosis of syphilis to the Kahn reaction only. In the best interests of the patient, the serum diagnosis of syphilis is best served by the performance of both tests on each serum.

SIGMUND S. GREENBAUM, M.D., Philadelphia.
Associate Professor of Dermatology and Syphilology, Graduate School of Medicine of the University of Pennsylvania.

ANAPHYLACTIC PHENOMENA AFTER TOXIN-ANTITOXIN

To the Editor:—I have noted several queries in THE JOURNAL as to the toxicity, if any, from the active immunization against diphtheria by periodic injections of toxin-antitoxin mixture. I have immunized a few thousand children during the last four years, without any definite reaction till recently.

A 10 months old baby had received two injections of the toxin-antitoxin mixture at two week intervals, without any reaction other than the usual local redness at the site of the injection. About ten minutes after the third injection, which was twenty-eight days and fourteen days, respectively, after the first and second injections, the child developed hyperpnea lasting a few seconds, then dyspnea for only a very few seconds; it became moderately cyanotic for perhaps thirty seconds, and, finally, two or three minutes later, giant urticaria appeared on the face and neck, and spread rapidly over the chest, abdomen and lower extremities.

However, on the administration of epinephrine hydrochloride, 7 minims (0.4 cc.), intramuscularly, the symptoms cleared up promptly. The child was under hospitalization for a few days, during which time there was no recurrence of the anaphylactoid phenomena.

This isolated report of a baby developing mild anaphylactic symptoms following the reinjection of such a small amount of horse serum (1/3000 cc.) brings to our attention the need for having epinephrine at hand in case of emergency. Of course, the fourth injection was omitted in this case.

S. A. WAHL, M.D., Cleveland.

[COMMENT.—It is very desirable that observations of this sort be reported. Only in this way can accurate information on this important matter be secured.—ED.]

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SYNCOPE DURING PREGNANCY—GLYCOSMETIC CAPSULES

To the Editor:—1. Under my observation is a woman about three months pregnant who has occasional syncopal attacks. These always occur in the morning before breakfast. There is no evidence of any cardiac lesion or anemia. Would pregnancy per se cause these attacks? 2. What are the ingredients of glycosmetic capsules (made by William H. Rorer)? Do they have any therapeutic value? Kindly omit name.

M. D., Pennsylvania.

ANSWER.—1. Not infrequently women complain of syncopal attacks during pregnancy. The attacks are usually accompanied by palpitation of the heart and pallor, and unless due to cardiac or other organic disease are of little significance. The cause is often a nervous, gastric or toxemic disturbance. A nonprotein diet and tonics are often helpful.

2. The capsules referred to are a preparation made from the desiccated small end of the pancreas of hogs and calves. Their therapeutic value is nil.

GALACTORRHEA

To the Editor:—Twenty-nine months ago, when my boy was 5 months of age, my wife weaned him because of repeated abscesses of the breasts. Although she has followed instructions carefully as to the methods of diminishing the milk, tight bandaging, belladonna, camphor oil, etc., she has not been successful, as it would help but slightly, and then only temporarily and the milk would return. At present, the breasts do not leak, but after a night's rest or an enjoyable meal they fill up and sometimes cake. There is no pain, except when they are in bandage, at which time pimples with pus, resembling skin pimple, appear. The last physician advised roentgen-ray treatment to diminish the milk. Do you think there is any danger of cancer from roentgen-ray treatment of the breasts? What effect would this have on the future lactation? Would there be any danger to let the condition remain as it is? I imagine there must be a constant drain on the vitality where lactation continues. She has not been pregnant since the last weaning.

D.D.S., Chicago.

ANSWER.—The galactorrhea is most likely due to the abscesses present at the time of weaning. If the flow of milk is not abundant, the vitality of the patient is little affected. Roentgen-ray treatment is radical and will be effective only if it produces a fibrosis and an atrophy of the lactating glands. In all likelihood the patient would not again be able to nurse a baby satisfactorily after such treatment. Cancer is not more likely to occur after roentgen-ray treatment of the breasts than after roentgen-ray treatment of other organs. The roentgen-ray treatment might light up the old infection, but the danger is remote. Since the breasts do not secrete milk but only become engorged, radical procedures are not advisable. On the theory that in human beings there is no flow of milk until the entire placenta has been expelled from the uterus, extracts of placenta have been tried; corpus luteum injections have been tried also with some favorable reports. Not infrequently, in cases of galactorrhea, hyperinvolution or atrophy of the uterus is present.

COCCYGEAL FISTULA

To the Editor:—I have under my care a man of 22 who has a small coccygeal fistula which opens just below the tip of the coccyx. This fistula discharges more or less continuously a thin fluid with a rather foul odor. He also has considerable backache on taking long automobile rides. The roentgen-ray examination shows a sacralization of the fifth lumbar vertebra and incomplete closure of the arches of the lumbar vertebrae. Considering the roentgen-ray findings, would it be a safe procedure to eradicate this fistula by cautery in order to do away with the objectionable discharge which at times causes a dermatitis about the opening of the fistula? Would there be any danger or probability of encountering a teratoma or a spina bifida occulta? Kindly omit name and address.

M.D., California.

ANSWER.—Judging from the location of the fistula and the roentgenologic evidence, the diagnosis is probably either a congenital sacrococcygeal cyst of ependymal origin which has ruptured externally and become infected, producing the fistula, or, even more likely, a meningocele or spina bifida occulta associated with a teratoma. In either case the indications for treatment are the same: surgical removal by careful dissection, giving particular attention to avoiding the probably present spina bifida. It would be dangerous to cauterize blindly the fistulous tract, and the removal would likely be incomplete. It is often helpful before beginning the dissection to inject the fistula with a thick methylene blue or pyoktanin solution so that the entire lining of the tract can be readily followed and thus the removal be complete, which is essential. An article on the general subject of tumors situated in this locality, with especial reference to pathogenesis, was published by Dr. George G. Davis (THE JOURNAL, April 16, 1910, p. 1288).

INCOMPATIBILITY OF QUININE AND ACETYLSALICYLIC ACID—CAFFEINE ACTION ON HEART

To the Editor:—1. Is acetylsalicylic acid incompatible with the salts or the alkaloid of quinine? Will acetylsalicylic acid and quinine form quinotoxin or quinicine, either or both of these toxic drugs? 2. Does caffeine act as a heart stimulant when combined with coal tar derivatives (acetanilid, etc.) so as to combat the heart depressing effects of the latter? I have read different statements on these questions, and should be pleased to have your opinion.

PAUL F. DEFORD, M.D., Pasadena, Calif.

ANSWER.—1. Acetylsalicylic acid and quinine are theoretically incompatible but practically not so. The mixture changes slowly, and the quinicine formed is not more toxic than the quinine. As "quinotoxin" is not toxic, the term had better be abandoned in favor of quinicine (Sollman: The Quinotoxin Myth, THE JOURNAL, April 9, 1921, p. 999).

2. The addition of caffeine to coal tar products, such as acetanilid, seems to have been made on the ground of merely theoretical reasoning. Animal experiments by Worth Hale indicate that the combination with caffeine increases the toxicity of acetanilid, actually lessening the animal's chances of recovery. Decisive observations on human beings are not available, and until they are the combination must remain under the suspicion of being undesirable.

EPINEPHRINE IN THE NOSE

To the Editor:—Parke, Davis & Company is putting on the market a preparation termed "adrenalin inhalant." I have been under the impression for a number of years that the constant use of adrenalin on the mucous membrane of the nose and throat would eventually cause paralysis of the vasomotors, with a resultant chronic congestion and turgescence of the mucous membrane. I think I came to this conclusion because of the fact that adrenalin had been used for the nose in patients with asthma and this effect was obtained.

H. L. WILDER, M.D., Clarendon, Texas.

ANSWER.—While it is possible that the long-continued use of epinephrine in the form of adrenalin or adrenalin inhalant may cause some turgescence of the nasal mucous membrane, few have noted any unfavorable results from the local or topical application of the various preparations. When epinephrine is used subcutaneously in cases of asthma continuously for a long time, vasomotor paralysis might occur.

EXCESSIVE PERSPIRATION

To the Editor:—I have a patient who perspires profusely on slight exertion. On this account he has refrained from dancing, playing tennis and other such sports. I have searched but failed to find the cause. Kindly give me etiology and treatment for this condition. Please omit name.

M.D., Michigan.

ANSWER.—Several possibilities may account for excessive perspiration. The individual may have an excessive development of sweat glands, with a correspondingly great activity, just as another individual may be excessively hairy. Another possibility is some disturbance of the mechanism controlling perspiration in an otherwise normal person. The most likely surmise about a patient whose chief worry is excessive perspiration is that it is an expression of morbid nervousness about the thing. It is an emotional disturbance just as is morbid blushing. Such disturbances usually occur in shy, self-centered persons. When they are able to control these characteristics, their excessive sweating ceases to trouble.

To relieve the difficulty in the first condition would be impossible and, in the second condition, if it did not prove impossible, would be difficult. It would involve a study of the patient and a rational course of treatment following it, which it is impossible to surmise or suggest from a description.

Another possibility is that the patient may be suffering from excessive perspiration from some weakening disease that is characterized by excessive perspiration. In this case the treatment would be the treatment of the condition.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Washington, D. C., May 17. Sec., Dr. William H. Wilder, 122 So. Michigan Blvd. Chicago.

ARKANSAS: Regular Board, Little Rock, May 10-11. Sec., Dr. J. W. Walker, Fayetteville. Homeopathic Board: Little Rock, May 10. Sec., Dr. Allison A. Pringle, Eureka Springs.

CALIFORNIA: Los Angeles, May 16-19. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

DISTRICT OF COLUMBIA: April 12. Sec., Dr. Edgar P. Copeland, 1801 Eye St., Washington.

GEORGIA: Atlanta and Augusta, June 8-10. Sec., Dr. J. W. Palmer, Ailey.

IOWA: Iowa City, June 7-9. Director of Exams. and Licensure, Mr. H. W. Grefe, Des Moines.

MARYLAND: Baltimore, June 7-10. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral Street, Baltimore.

NATIONAL BOARD OF MEDICAL EXAMINERS: Part I, June 15-17. Applications should be made by May 15. Sec., Dr. John S. Rodman, 1600 Walnut Street, Philadelphia.

NEVADA: Carson City, May 1. Acting Sec., Dr. Edward E. Hamer, Carson City.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. W. T. Joyner, Roswell.

WASHINGTON: Seattle, April 11. Reciprocity meeting only. Asst. Director of Licenses, Mr. George L. Berger, Olympia.

Maine November Examination

Dr. Adam P. Leighton, Jr., secretary of the Maine Board of Registration of Medicine, reports the oral and written examination held at Portland, Nov. 9-10, 1926. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. Of the 14 candidates examined, 12 passed and 2 failed. The following colleges were represented:

PASSED			
College	Year Grad.		Per Cent
Yale University School of Medicine	(1925)	80, (1926) 82,	85.2
Tufts College Medical School	(1926)	81, 84, 85,	85.6
Columbia University College of Phys. and Surgs.	(1912)		83.6
Dalhousie University Faculty of Medicine	(1922)		84.9
Laval University Faculty of Medicine	(1913)		77.5
McGill University Faculty of Medicine	(1924)	82, (1923)	79.5

FAILED		
College	Year Grad.	Per Cent
Laval University Faculty of Medicine	(1926)	70.6, 74.1

Book Notices

CONTRIBUTIONS TO THE ART AND SCIENCE OF OTOLOGY. By Richard Lake, F.R.C.S., G. E. Duveen Lecturer on Otology, University of London. Cloth. Price, 15 s. net. Pp. 255, with illustrations. London: Macmillan & Company, 1926.

This little volume has brought together a large series of papers of one of the most prominent otologists of the English speaking world. Among the subjects discussed are the structure of aural polypi, disease of the semicircular canal, facial paralysis in recent otitis media, operations on the mastoid, anatomy and pathology of the periosteum of the ear, chronic suppuration of the middle ear, treatment of middle ear deafness, testing the hearing with higher tuning forks, earache, and fixation of the stapes. A number of the papers are in French just as they appeared in the various French journals. The subjects mentioned form only a small part of those presented in the book, in which the author covers a wide range of topics in otology. Coming as they do from the pen of so noted a man, they are not only interesting but exceedingly valuable and contain many practical points culled by him through a long and varied experience in the practice of his specialty. Most of the articles are short, some of them only one or two pages. There is one on means and methods of testing aural disease which is quite extensive. Stress is laid on the proper handling of tuning forks, and their deficiences are pointed out. The author is disturbed by the fact that tuning forks, as a rule, have certain overtones. It was shown long ago that either by the use of weights or by placing a thick rubber band on the distal third of the prong or by carefully forging the fork, overtones are to a large degree eliminated. Lake considers the Weber and Gelle tests as practically worthless, and states that he uses the Rinne test but considers the Bing test the "most valuable tuning fork test which we possess." In the Schwabach test, if the meatuses are closed with the fingers, lengthened bone conduction normally occurs; in the middle ear disease, however, bone conduction is already considerably prolonged, so that there is no increase with this method; when there is inner ear disease, closing the meatuses lengthens the bone conduction somewhat. Differences of opinion will arise, of course, among otologists as well as students in other branches of science. All in all, Lake's book should prove of considerable interest to otologists from the practical and scientific standpoint.

HANDBUCH DER UROLOGIE. Herausgegeben von A. v. Lichtenberg, F. Voelcker, und H. Wildbolz. Band I. Allgemeine Urologie. Teil 1. Chirurgische Anatomie. Pathologische Physiologie. Harnuntersuchung. Von H. Boeminghaus, R. Freise, und Anderen. Paper. Price, 93 marks. Pp. 754, with 312 illustrations. Berlin: Julius Springer, 1926.

This is the first volume of a urologic system that is intended to supplant the antiquated German textbooks. The chapters are devoted to the various organs of the urinary system and their appendages. In each chapter the topography of the structures is first discussed; then the descriptive anatomy so far as it is of importance to surgery. The placing of the patient, the necessary instruments and the steps of each operation are elaborated in detail. If several operative methods for the relief of pathologic conditions are available all are described, and in an epicrisis a complete evaluation of their specific points is furnished. Each chapter is written by a different author, who was selected for his contributions to the pertinent research work. American urologists will certainly miss a chapter on surgical diathermy, which is so highly developed in this country. The numerous illustrations are clear and instructive. Five chapters are devoted to the discussion of the pathologic physiology of the genito-urinary organs. The three closing chapters deal with the examination of the urine from a bacteriologic, microscopic and chemical point of view. The world's literature is extensively quoted and registered. This system undoubtedly will be a valuable textbook of reference.

TEN WEEKS WITH CHINESE BANDITS. By Harvey J. Howard, M.D., Professor of Ophthalmology, Peking Union Medical College. Cloth. Price, $3. Pp. 272, with illustrations. New York: Dodd, Mead & Company, 1926.

The intensely thrilling account written by Dr. Harvey J. Howard, professor of ophthalmology at the Peking Union Medical College, of his experiences and impressions when he was captured by Chinese bandits and remained with them for approximately ten weeks during 1925 has already been presented to the world through newspaper syndication. Publication in book form makes it generally available. It merits a high place among contributions of medical authorship in general literature. The story is told with a fine sense of dramatic quality. It opens with the capture of the boat by the bandits, and details with scientific exactitude the progress of events until the rescue of Dr. Howard by soldiers of the Chinese army. The illustrations are a valuable addition to the work. The book may be read with interest not only by physicians but also by every one who has an interest in adventure.

PROGRESS OF THE SCIENCE OF NUTRITION IN JAPAN. By Tadasu Saiki. League of Nations. Health Organization. Paper. Pp. 387. Geneva: League of Nations, 1926.

The problems of food and nutrition are of vital importance for Japan. It is not a big country, nor are its agricultural advantages abundant; it has a large population, so that the pressure of food needs is one of national concern. As a recent writer has reviewed the situation, in the past Japan was entirely dependent on food supplies from abroad, and famine with all its consequences was of frequent occurrence; but during the last fifty years the modern development of the country, its agriculture and industry, has to a large extent

rendered it independent of foreign supplies, and food conditions have considerably improved. At present the food resources of the country consist of 400 varieties of common foodstuffs, to which must be added about 500 varieties of foodstuffs which can be employed in time of emergency. All these foodstuffs—those which are commonly used by the people and those which it would seem need to be used only in exceptional circumstances—should be studied from the point of view of their chemical composition, their production and improved methods of utilization if the country is to be spared the privations it has endured in the past. The present volume is illustrative of the efforts now being made by Japanese scientists to investigate the problems of nutrition, particularly as they apply to the Japanese people. This means that the adaptability of the nationally available foods to nutritional needs has become the subject of careful study. The economic and sociological aspects of the food problem are requiring special consideration. The editor is Dr. Tadasu Saiki, director of the state institute for the study of nutrition, the first laboratory organized in Japan for independent investigation of the problems referred to. Of the twenty-two papers in the volume, the large number represent researches undertaken in Dr. Saiki's Institute. There are thus made available in the English language a series of investigations covering such items as the basal metabolism of the Japanese—a recently debated theme; the composition and digestibility of various types of rice under different conditions; the vitamin content of Japanese foods, and deficiency diseases. One of the papers has already been reviewed editorially in THE JOURNAL.

FOUR THOUSAND YEARS OF PHARMACY: An Outline History of Pharmacy and the Allied Sciences. By Charles H. LaWall, Ph.M., Phar.D., Sc.D., Professor of Theory and Practice of Pharmacy and Dean of the Philadelphia College of Pharmacy and Science. Cloth. Price, $5. Pp. 665, with 64 illustrations. Philadelphia: J. B. Lippincott Company, 1927.

As Dr. LaWall points out in the preface to his book, other volumes on the history of pharmacy are pitifully few, especially in English. The present book is based on the course of lectures each year in the Philadelphia College of Pharmacy and Science. Beginning with ancient pharmacy and its earliest sideline, medicine, Dr. LaWall traces the growth of this subject through the Greek, Alexandrian and Roman periods, through the accumulation of data by the ancient Arabians and the origin of universities in the middle ages. He shows how pharmacy, like medicine, languished while men gave more attention to the soul than to the body, and he opens the new epoch in science with a chapter entitled "The Glorious Sixteenth Century in Pharmacy." From the sixteenth century onward, pharmacy progressed coincidently with other basic sciences. Those readers whose interest is not primarily historical will find much of immediate, practical value in the concluding chapters on the eighteenth and twentieth centuries. Here Dr. LaWall traces the rise of pharmaceutical ethics, the contributions made by investigators, and the development of modern advertising and commercial pharmacy, and he ends with a forecast for the future. The book is an epoch marking contribution in American pharmaceutical literature.

HANDBUCH DER INNEREN SEKRETION. Eine umfassende Darstellung der Anatomie, Physiologie und Pathologie der endokrinen Drüsen. Band III. Lieferung 1. Herausgegeben von Dr. Max Hirsch. Paper. Price, 16 marks. Pp. 201, with illustrations. Leipsic: Curt Kabitzsch, 1927.

This section deals with the diseases of the thyroid gland. It is divided into four chapters. The first chapter, on hyperthyroidism, is written by Dr. G. Deusch. The chapter on hypothyroidism of the adult is by Dr. Hans Curschmann; in the appendix to this chapter is a brief discussion on chagas and adipositas dolorosa. The third chapter, on hypothyroidism in childhood, is by Dr. Emil Wieland, and the final chapter, on athyreodosis in childhood, is by Dr. F. Siegert. Each author takes up the diagnosis, symptomatology and therapy of the respective disorders in a clear and critical manner. Each chapter has appended bibliographies of the most important clinical literature dealing with the subject.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

NURSING IN DISEASES OF THE EYE, EAR, NOSE AND THROAT. By Harmon Smith, M.D., Senior Surgeon Director in Throat Department, Manhattan Eye, Ear, and Throat Hospital, New York City, New York, John R. Shannon, M.D., Surgeon Director in Eye Department, and John E. Mackenty, M.D., Surgeon Director in Throat Department, and others. Fourth edition. Cloth. Price, $2.25 net. Pp. 335, with 72 illustrations. Philadelphia: W. B. Saunders Company, 1927.

Special problems of nursing in a special field thoroughly elucidated—perhaps too thoroughly.

A RETROSPECT OF SURGERY IN KENTUCKY. The Presidential Address Delivered Before the Southern Surgical Association at Louisville, December 16, 1925. The Heritage of Kentucky Medicine: The Presidential Address, Delivered Before the Kentucky State Medical Association at Frankfort, September 21, 1926. By Irvin Abell, M.D. Cloth. Pp. 64, with illustrations. Louisville, 1926.

A beautifully illustrated address of medical historical interest.

SOCIAL ADJUSTMENT. By Robert Cloutman Dexter, Ph.D., Professor of Social and Political Science, Skidmore College. Cloth. Price, $3.50. Pp. 424. New York: Alfred A. Knopf, 1927.

Easily readable guide book to the whole field of social welfare work.

MEDICAL ORGANIZATION AND MEDICAL BIOGRAPHY OF SENECA COUNTY, NEW YORK: An historical sketch of the Seneca County Medical Society, with some account of its living and of its pioneer members, to which is added biographical sketches of all other physicians, not members of the society, who have practiced the art in Seneca County, New York, together with brief sketches of Willard State Hospital, Seneca Falls Hospital, and the Waterloo Memorial Hospital. Compiled by Lester W. Bellows, M.D. Cloth. Price, $4.50. Pp. 429. West Henrietta, New York: Manzler Publishing Corporation, 1926.

LES INSUFFISANCES PANCRÉATIQUES: L'insuffisance pancréatique externe et les dyspepsies pancréatiques: L'insuffisance pancréatique interne et les syndromes diabétiques. Par. M. Chiray, professeur agrégé à la faculté de Paris, et J. Lebon. Paper. Price, 20 francs. Pp. 210. Paris: Masson & Cie, 1926.

TECHNIQUE DE LA RÉACTION DU BENJOIN COLLOÏDAL. Par Georges Guillain, professeur à la faculté de médecine de Paris, Guy Laroche, médecin des hôpitaux de Paris, et P. Lechelle, médecin des hôpitaux de Paris. Paper. Price, 11 francs. Pp. 36, with illustrations. Paris: Masson & Cie, 1926.

TRATAMIENTO DE LA TUBERCULOSIS PULMONAR POR LA SANOCRISINA: A dosis medianas y pequeñas. Por los doctores R. Dargallo, y M. Espinosa, médicos del servicio antituberculoso del hospital clínico de Barcelona. Paper. Pp. 73 with 50 illustrations. Barcelona: Francisco Sintes, 1926.

L'AÉROPHAGE: Syndromes gastriques, intestinaux, circulatoires et respiratoires. Étude clinique, radiologique et thérapeutique. L'enfant, l'adulte, le nourrisson. Par le Dr. G. Leven. Second edition. Paper Price, 14 fr. Pp. 256, with 28 illustrations. Paris: Gaston Doin & Cie, 1926.

ENGLISH-SPANISH MEDICAL DICTIONARY. (Diccionario Médico Inglés-Español). By (LCDO.) A. A. Moll, A.M., Editor Spanish Edition, Journal American Medical Association. Cloth. Price, $1.50. Pp. 214. Chicago: American Medical Association, 1926.

PRACTICAL SURGERY OF THE JOSEPH PRICE HOSPITAL. By James William Kennedy, M.D., F.A.C.S., Surgeon to the Joseph Price Hospital, Philadelphia. Cloth. Price, $10 net. Pp. 861, with 129 illustrations. Philadelphia: F. A. Davis Company, 1926.

LES ACCIDENTS SÉRIQUES. Prophylaxie. — Traitement. Par R.-J. Weissenbach, médecin des hôpitaux de Paris, et Gilbert-Dreyfus, interne des hôpitaux de Paris. Paper. Price, 11 francs. Pp. 158. Paris: Gaston Doin & Cie, 1927.

LA ROUGEOLE. ÉPIDÉMIOLOGIE, IMMUNOLOGIE, PROPHYLAXIE. Par Robert Debré, et Pierre Joannon. Préface du Pr. Léon Bernard. Paper. Price, 35 francs. Pp. 288, with illustrations. Paris: Masson & Cie, 1926.

ESSAI SUR UNE NOUVELLE RADIOLOGIE VASCULAIRE. Par Manoel de Abreu. Paper. Price, 38 francs. Pp. 207, with illustrations. Paris: Masson & Cie, 1926.

Medicolegal

Representations as to Health Omitting Latent Disease

(Livingood v. New York Life Ins. Co. (Pa.), 134 Atl. R. 474)

The Supreme Court of Pennsylvania, in affirming a judgment in favor of the plaintiff as the beneficiary of a life insurance policy, says that when the applicant for insurance asserts that he is in good health, and reasonably believes this to be true, though in fact suffering from some insidious disorder, a recovery may be had. The insured is bound to disclose honestly facts concerning his physical condition, which he knew of, or should have observed, but he is not charged with knowledge of the existence of a latent disease of which, from the nature of things, he could not have exact information. In the instant case, the jury was properly not permitted to guess that the insured was consumptive, because tuberculous trouble is accompanied with "night sweats," a condition often discovered among those suffering from various ailments, trivial and otherwise, though appearing with sufficient frequency to be denominated "characteristic."

Anthrax Compensable as Injury Arising by Accident

(Houston Packing Co. et al. v. Mason (Texas), 286 S. W. R. 862)

The Court of Civil Appeals of Texas says that Mrs. Mason alleged that her husband contracted anthrax in the due course of his employment, and that his death resulted from the disease so contracted. It was shown that he was employed by the defendant packing company, and that his work was skinning cattle. The defendants contended that the contracting of the disease and the death resulting therefrom did not come within the workmen's compensation act of Texas, because the contracting of the disease was not an accidental injury or a disease naturally resulting from an injury. The authorities are not in harmony as to whether death resulting from such disease contracted by an employee in the course of his employment is compensable as for an injury arising by accident. The great weight of authority, this court believes, holds that in such cases compensation should be allowed, and the court thinks that the authorities so holding are sounder in principle and more in consonance with the intent and reason of the law and the liberal interpretation to be given it than those holding to the contrary. In such cases it is because the employee in the discharge of his duty is brought into contact with the anthrax germ that he contracts the disease, and this court thinks that it is correct to say that the consequent injury suffered by the employee was accidental, and the result of a hazard incident to and in the course of his employment and therefore compensable. However, a judgment for $5,711.27 compensation is reversed and the cause remanded, because the court below was without jurisdiction to hear the case and render the judgment, as there was nothing in the record to show that notice had been given of dissatisfaction with the award of the industrial accident board, whatever that award was, which is not stated.

Society Proceedings

COMING MEETINGS

American Medical Association, Washington, D. C., May 16-20. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Montgomery, April 19-22. Dr. D. L. Cannon, 519 Dexter Ave., Montgomery, Assistant Secretary.

American Association for the Study of Allergy, Washington, D. C., May 16-17. Dr. A. H. Rowe, 242 Moss Ave., Oakland, Calif., Sec'y.

American Association for Thoracic Surgery, New York, May 9-11. Dr. Ethan Flagg Butler, Robert Packer Hospital, Sayre, Pa., Secretary.

American Association of Genito-Urinary Surgeons, Absecon, N. J., May 9-11. Dr. W. C. Quinby, Peter Bent Brigham Hospital, Boston, Sec'y.

American Bronchoscopic Society, Atlantic City, May 21. Dr. H. B. Orton, 24 Commerce Street, Newark, N. J., Secretary.

American Child Health Association, Washington, D. C., May 9-11. Dr. Philip Van Ingen, 125 East 71st Street, New York, Secretary.

American Climatological and Clinical Association, White Sulphur Springs, W. Va., May 23-27. Dr. A. K. Stone, Auburn Street, Framingham Center, Mass., Secretary.

American Gastro-Enterological Association, Atlantic City, May 2-3. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Hot Springs, Virginia, May 23-25. Dr. F. E. Keene, Medical Arts Building, Philadelphia, Secretary.

American Laryngological Association, Atlantic City, May 23-25. Dr. G. M. Coates, 1721 Pine Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Atlantic City, May 26-28. Dr. R. L. Loughran, 33 East 63d Street, New York, Secretary.

American Neurological Association, Atlantic City, May 24-26. Dr. H. A. Riley, 870 Madison Avenue, New York, Secretary.

American Proctologic Society, Philadelphia, May 12-14. Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn., Secretary.

American Psychiatric Association, Cincinnati, May 31. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, Cincinnati, June 3. Dr. M. W. Peck, 520 Commonwealth Avenue, Boston, Secretary.

American Radium Society, Washington, D. C., May 16-17. Dr. E. C. Ernst, 412 Humboldt Building, St. Louis, Secretary.

American Society of Clinical Investigation, Atlantic City, May 2. Dr. J. T. Wearn, Boston City Hospital, Boston, Secretary.

American Society of Clinical Pathologists, Washington, D. C., May 13-16. Dr. Ward T. Burdick, Children's Hospital, Denver, Secretary.

American Surgical Association, Richmond, Va., May 12-14. Dr. R. B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Washington, D. C., May 14-16. Dr. W. J. Mallory, 1720 Connecticut Ave., N. W., Washington, D. C., Secretary.

American Urological Association, Baltimore, May 23-25. Dr. H. G. Hamer, 723 Hume-Mansur Building, Indianapolis, Secretary.

Arizona State Medical Association, Yuma, April 21-23. Dr. D. F. Harbridge, Goodrich Building, Phoenix, Secretary.

Arkansas Medical Society, Little Rock, May 11-13. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Associated Anesthetists of the United States and Canada, Washington, D. C., May 16-17. Dr. F. H. McMechan, Avon Lake, Ohio, Secretary.

Association of American Physicians, Atlantic City, May 3-4. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.

California Medical Association, Los Angeles, April 25-28. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Connecticut State Medical Society, Hartford, May 25-26. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Georgia, Medical Association of, Athens, May 11-13. Dr. Allen H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii Territorial Medical Association, Honolulu, May 2-4. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Moline, May 31-June 2. Dr. H. M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Council Bluffs, May 11-13. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Hutchinson, May 3-5. Dr. J. F. Hassig, 804 Huron Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 26-28. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 26-28. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Massachusetts Medical Society, Boston, June 6-8. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Washington, D. C., May 16-17. Miss Sue Biethan, General Library, University of Michigan, Ann Arbor, Sec'y.

Medical Women's National Association, Washington, D. C., May 15-17. Dr. Maud Parker, Medical Dental Building, Seattle, Secretary.

Mississippi State Medical Association, Vicksburg, May 10-12. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, Sedalia, May 2-5. Dr. E. J. Goodwin, 901 Missouri Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, Cincinnati, May 30-31. Dr. A. L. Shaw, 108B Olbiston Building, Utica, N. Y., Secretary.

National Tuberculosis Association, Indianapolis, May 23-26. Dr. G. M. Kober, 1819 Q. Street, N. W., Washington, D. C., Secretary.

Nebraska State Medical Association, Lincoln, May 10-12. Dr. R. B. Adams, McKinley Building, Lincoln, Secretary.

New Jersey, Medical Society of, Atlantic City, June 9-11. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.

New Mexico Medical Society, Carlsbad, May 9-11. Dr. C. M. Yater, 310 N. Richardson Avenue, Roswell, Secretary.

New York, Medical Society of the State of, Niagara Falls, May 9-12. Dr. D. S. Dougherty, 2 East 103d Street, New York, Secretary.

North Carolina, Medical Society of the State of, Durham, April 18-21. Dr. L. B. McBrayer, Southern Pines, Secretary.

North Dakota State Medical Association, Grand Forks, June 1-2. Dr. J. G. Lamont, San Haven, Acting Secretary.

Ohio State Medical Association, Columbus, May 10-12. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Oklahoma State Medical Association, Muskogee, May 4-6. Dr. C. A. Thompson, 609 Barnes Building, Muskogee, Secretary.

Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Carolina Medical Association, Anderson, April 19-21. Dr. E. A. Hines, Seneca, Secretary.

South Dakota State Medical Association, Huron, May 3-5. Dr. John P. D. Cook, Langford, Secretary.

Texas, State Medical Association of, El Paso, April 26-28. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Gynecology, St. Louis

13: 133-278 (Feb.) 1927

*Bacterial Content of Uterus at Cesarean Section. J. W. Harris and J. H. Brown, Baltimore.—p. 133.

Carcinoma of Cervix Uteri: One Hundred and Eighty-Four Cases. J. G. Clark and L. K. Ferguson, Philadelphia.—p. 144.

*Results Obtained with Parathyroid Extract in Control of Idiopathic Menstrual Bleeding. E. Allen, E. L. Compere, Jr., and W. C. Austin, Chicago.—p. 156.

Origin of Common Cystic Structures of Human Placenta. R. Paddock and E. D. Greer, St. Louis.—p. 164.

Carcinoma of Cervix Uteri: One Hundred and Ten Cases. C. F. Fluhmann, San Francisco.—p. 174.

Iniencephalus: Case. W. E. Welz and B. L. Lieberman, Detroit.—p. 184.

*Hydatidiform Mole Complicated by Perforation of Uterine Wall and Secondary Chorio-Epithelioma of Pelvis. P. B. Bland, Philadelphia.—p. 189.

Significance of Thyroid Enlargement During Pregnancy. J. W. Hinton, New York.—p. 204.

Uterine Prolapse Associated with Spina Bifida in New-Born: Case. I. H. Noyes, Providence, R. I.—p. 209.

Spinal Anesthesia in Gynecology: Fifty Cases. A. J. Murphy, New York.—p. 214.

*Use of Castor Oil, Quinine and Pituitary Extract in Induction of Labor. A. Mathieu, Portland, Ore.—p. 223.

*Is Sedimentation Test of Practical Value in Gynecology? P. F. Williams, Philadelphia.—p. 228.

Narco Local Anesthesia in Cesarean Section. F. E. Keller, Philadelphia.—p. 234.

*Fallacy of Present Treatment of Postparturient Breast. W. W. van Dolsen, Philadelphia.—p. 236.

*Nonspecific Protein Therapy in Gynecology. L. Averett, Philadelphia.—p. 238.

Hydramnios in Uniovular Twins. J. F. Carrell, Philadelphia.—p. 243.

Peritoneal Actinomycosis: Case. T. H. Cherry, New York.—p. 248.

*Reliability of Wassermann Reaction in Pregnancy: Five Hundred Cases. J. R. McCord, Atlanta, Ga.—p. 252.

Bilateral Dermoid Cysts of Ovaries in Young Girl. J. P. McDowell, St. Cloud, Minn.—p. 253.

Maternity Work in Colony of Hong Kong. R. E. Totenham, Hong Kong, China.—p. 254.

Bacterial Content of Uterus at Cesarean Section.—A bacteriologic study of the uterine contents obtained at fifty cesarean sections was made by Harris and Brown. In nineteen elective sections performed at an appointed time at the end of pregnancy, and before the rupture of the membranes, the uterus was uniformly sterile. This applies, further, to six cases in which the classic section was performed within four hours after the onset of labor. In five patients in whom classic section was performed six or more hours after the onset of labor, bacteria could always be demonstrated in the lower uterine segment, and there were streptococci in three of the cases. Similar results were obtained in thirteen low cervical and six radical sections, and the uterine contents were sterile only in the three cases in which the operation was performed within a few hours after the onset of labor.

Parathyroid Extract to Control Menstrual Bleeding.—Allen, Compere and Austin conclude that the calcium content of the blood, following such doses of parathyroid extract as they have used, does not show the rise reported by Kylin, but that the bleeding time and clotting time of the blood were definitely shortened. The number of days of menstrual bleeding, as well as the amount of blood lost, was appreciably reduced. During the intermenstrual period, the patients were not so reduced in strength and vitality. They recommended a total dosage of from 120 to 160 units, given in divided doses of 20 units, morning and evening. The best results were obtained by starting the intramuscular injection the day before the period was due.

Hydatidiform Mole.—The case reported by Bland portrays the transition of a lesion, which was regarded both clinically and pathologically as a benign hydatidiform mole, to a perforating or malignant mole, and finally to a highly malignant chorio-epithelioma.

Induction of Labor by Quinine and Castor Oil.—In a series of ninety-one cases reported on by Mathieu in which induction of labor was successful in 96.7 per cent with castor oil, quinine and pituitary extract, there were no maternal or fetal deaths, either early or late. There were eight cases in which there was early rupture of the membranes (after labor had commenced but before the cervix was dilated two fingers). This did not have a bad effect on the labors, and morbidity did not result. The longest labor in this group was eight and one-half hours in a primipara, and the shortest was one hour in a multipara.

Sedimentation Test in Gynecology.—Williams used the sedimentation test in ten cases of myoma and in fifteen miscellaneous gynecologic conditions. He found that the sedimentation test, while simple and easy to carry out, has not seemed to be consistent in expressing the reaction of the body to the disease process or to the nature of the pathologic condition as found at operation. A rapid sedimentation time has not been found to presage any unusual degree of postoperative morbidity. In comparison with this test, the temperature curve and the study of the leukocytes remain as more stable and reliable indexes for diagnosis and prognosis.

Treatment of Postparturient Breast.—Van Dolsen believes that by a conscientious use of 0.1 per cent hypochlorite solution as a skin antiseptic in nursing mothers, the infection resulting from surface bacteria can be eradicated. In six months of continuous use he has not had any cases of breast abscess develop while the patient was in the hospital; and has not seen any trace of irritation either to the skin of the breast or the baby's mouth. Experimental study showed that a breast washed with boric acid solution was not safeguarded to any decided degree.

Nonspecific Protein Therapy in Gynecology.—Averett has treated thirty-two cases of pelvic inflammation with nonspecific proteins; twenty-four acute and subacute, and eight chronic cases. He failed to obtain any beneficial result in the chronic cases. In the acute cases, the quickest and best results were obtained in those due to the gonococcus. Averett uses sterile milk because it does not cause a shock reaction and does not entail a hazard to the patient.

Reliability of Wassermann Reaction in Pregnancy.—The variability of the Wassermann reaction during pregnancy was tested by McCord in 500 cases. The reactions agreed in 87 per cent. In thirty-nine cases, the clinic Wassermann reactions were positive and the labor Wassermann reactions were negative. Of these, thirty-one women had had antisyphilitic treatment. If these cases are deducted, the reactions agreed in 93 per cent.

Journal of Urology, Baltimore

17: 105-260 (Feb.) 1927

*Pyelovenous Backflow. R. K. Lee-Brown, Sydney, Australia.—p. 105.

*Surgical Treatment of Chronic Pyelonephritis. W. F. Braasch, Rochester, Minn.—p. 113.

*Tumor Implantation Following Nephrectomy for Papillary Cystadenoma. W. A. Frontz, Baltimore.—p. 121.

*Low Function Kidney. D. W. MacKenzie and M. I. Seng, Montreal.—p. 127.

*Effect of Magnesium Sulphate on Phenolsulphonphthalein Elimination. F. S. Crockett, LaFayette, Ind.—p. 139.

*Effect of Ether Anesthesia on Renal Function. W. H. Haines and L. F. Milliken, Philadelphia.—p. 147.

*Results in Primary Carcinoma of Ureter Following Nephro-Ureterectomy. A. Crance and H. J. Knickerbocker, Geneva, N. Y.—p. 157.

*Primary Malignant Papillary Cystadenoma of Kidney with Fungating Growth in Pelvis. W. C. Stirling, Washington, D. C.—p. 165.

*End Results in Genito-Urinary Cancer. H. W. E. Walther, New Orleans.—p. 179.

Extension of Life in Genito-Urinary Carcinoma. B. S. Barringer, New York.—p. 199.

Radium Treatment of Eight Bladder Tumors. E. L. Keyes, New York.—p. 205.

Pathogenesis of Renal Tuberculosis. C. W. Eberbach, Ann Arbor, Mich.—p. 233.

Large Solitary Cyst of Kidney. M. Joseph, Passaic, N. J.—p. 245.
Perinephritic Abscess Following Peripheral Infections. A. Peterson, Los Angeles, Calif.—p. 249.
Diverticulum of Bladder. I. R. Sisk, Madison, Wis.—p. 255.
Vesical Calculi: Two Cases. E. C. Smith, Edmonton, Alberta.—p. 259.

Pyelovenous Backflow.—An explanation of the phenomenon of pyelovenous backflow is offered by Lee-Brown as the result of personally made experiments. He found that any fluid forcibly introduced into the kidney substance, either through minute tears in the pelvic mucosa or by direct injection into the parenchyma from the outside, will pass directly into the venous system. The statement that pyelovenous backflow does not and will not occur is said to be both incorrect and misleading. Pyelovenous backflow is entirely distinct from tubular injection, though the two can occur in the same kidney simultaneously.

Surgical Treatment of Chronic Pyelonephritis. — In Braasch's opinion, it is evident that with chronic pyelonephritis, complications may arise that necessitate surgical treatment. When such complications are unilateral and do not yield to the usual methods of treatment, nephrectomy may be indicated even though the renal infection is bilateral. He has not found palliative operations, such as nephrorrhaphy, decapsulation, pyelotomy with drainage, or nephrotomy, of any value in any case of chronic pyelonephritis.

Implantation of Cystadenoma Following Nephrectomy.—A unique case is reported by Frontz. Following nephrectomy for renal papillary cystadenoma, there developed in the abdominal musculature a tumor which was identical histologically with the neoplasm found in the kidney. The condition was regarded as the result of implantation of tumor cells occurring at the time of the nephrectomy, despite the fact that the kidney was apparently removed without contamination of the operative field.

Low Function Kidney.—A series of 361 cases, all showing a renal function output of 40 per cent or less, estimated by the phenolsulphonphthalein test, was studied by MacKenzie and Seng. Lesions of the upper and lower urinary tract were found, the majority in the lower tract, and usually of the obstructive type. The urinary observations were not striking, except that virtually all the series showed some pathologic cellular elements. The average specific gravity remained at the slightly lowered reading of 1.014. Phenolsulphonphthalein estimation and blood chemistry examination of renal function gave for the most part parallel data, especially in the more severe degree of renal impairment. Creatinine was found to be less influenced early than blood urea and urea nitrogen. One fifth of the cases showed marked lowering of functional output to below 20 per cent. In this group occurred nearly one half of the thirty deaths in the series. On the institution of proper drainage and relief of obstruction, whether upper or lower tension, more than one third of the series showed decided, and in some instances rapid, improvement in the renal function output. Surgical intervention, mainly to establish or improve drainage and to relieve obstruction was necessary in about one half the series. The results were encouraging. The deaths occurred in extreme cases with markedly lowered phthalein output, and severe degrees of blood retention products.

Effect of Magnesium Sulphate on Phenolsulphonphthalein Elimination.—Crockett has found that the elimination of phenolsulphonphthalein, given intravenously or intramuscularly, is delayed by magnesium sulphate given by mouth. This delay effect continues for three or four hours after administration of the saline. Calcium chloride will neutralize this inhibitory influence of magnesium sulphate on phenolsulphonphthalein elimination, but it does not exert a noticeable influence on the cathartic action of magnesium sulphate. It is apparent that any one using phenolsulphonphthalein as a function test must bear in mind the effects of magnesium sulphate and other saline cathartics, and that this influence continues for a period of three or four hours.

Effect of Ether Anesthesia on Renal Function.—Experiments made by Haines and Milliken on dogs demonstrated that deep ether anesthesia markedly inhibits kidney function in experimental animals. The effect of ether on the kidneys appears to be that of a vasoconstrictor. Albuminuria and the other renal sequelae of ether anesthesia are probably due to a secondary capillary hyperemia following the primary vasoconstriction. It is not likely that ether has any direct toxic action on the tissues of the kidney. Preliminary injection of morphine and atropine prevents ether inhibition of renal function in experimental animals.

Results in Primary Carcinoma of Ureter Following Nephro-Ureterectomy.—A case of carcinoma of the ureter in a housewife, aged 42, is reported by Crance and Knickerbocker, in which a complete nephro-ureterectomy was done at one sitting, nearly two and one-half years ago. Cystoscopic evidence and the absence of clinical symptoms are indications that there has not been, to date, any recurrence of the lesion.

Malignant Papillary Cystadenoma of Kidney.—Stirling's case was one of malignant papillary cystadenoma of the kidney with a fungating growth in the pelvis, occurring in a girl, aged 18. The kidney was removed in September, 1925, and up to the present there has not been a recurrence of symptoms. However, malignant cystadenoma of the kidney usually is slow growing, and of a relatively low grade of malignancy; it offers the best prognosis of any group of renal carcinoma.

Analysis of Genito-Urinary Cancer.—One hundred and sixteen cases of cancer of the bladder, prostate, penis and testis are analyzed by Walther. Attention is directed to the incidence of genito-urinary cancer in the negro. Fifty-two patients, or 44.8 per cent, are dead; twenty-seven are recorded as improved; fifteen apparently are well. The growth was not arrested in three cases. This study reveals the significant fact that thirty-one different methods in technic were directed at destroying malignant growths in four organs.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Lancet, London

1: 215-268 (Jan. 29) 1927

*Cancer and How to Fight It. B. Moynihan.—p. 215.
Abortion. J. S. Fairbairn.—p. 217.
*Ethical, Legal and Medical Aspects of Abortion. Riddell.—p. 219.
*Treatment of Varicose Veins. A. L. Vischer.—p. 223.
*Injection Treatment of Localized Tuberculous Lesions. R. Pollok.—p. 224.
*Stricture of Jejunum: Two Cases. A. C. Perry.—p. 226.
Case of Tuberculous Salpingitis Associated with Acute Gonorrhea. M. Salmond.—p. 228.

Combating Cancer.—The points on which Moynihan says attention should be concentrated in the fight against cancer are: (1) To make the very utmost of present methods which are applicable to all cases of accessible growths. (2) To undertake research, so that the cause or causes of cancer may be discovered and something done for the prevention of the disease or for its cure by methods other than those of surgery.

Abortion.—The various legal phases of abortion are discussed by Riddell, who is a lawyer. He concludes his paper by stating: Procuring abortion involves serious and exceptional responsibilities which a patient is not entitled to thrust on her medical adviser. Therefore she should be warned against future pregnancies and, in appropriate cases, sterilization should be recommended. Cesarean section differs, of course, from abortion, as there is not any express statutory prohibition; but if a cesarean section were performed unnecessarily and the patient died as a result, the practitioner would be liable to conviction for manslaughter. Nature has ordained that children shall be produced in a certain fashion, and abnormal methods are not justifiable to gratify whim or caprice. Nor, it is submitted, should the practitioner lend himself to a series of such operations. If a woman cannot bear children in the usual way, she should be warned against further pregnancies that must result in abortion or in an operation attended by serious risk.

Treatment of Varicose Veins by Injection.—Vischer presents the advantages of the treatment of varicose veins by means of intravenous injection of various substances. He

lays particular stress on the unwarranted fear of embolism, because in varicose veins the blood does not flow toward the heart but toward the periphery. Experiments have proved that in the recumbent position of the patient the blood in the varicose saphenous vein flows toward the heart or, in many cases, is practically stationary. When in an upright position, or even on bending the leg only 45 degrees, the blood flows backward toward the periphery, and the rapidity of the centrifugal stream is distinctly greater than that of the normal centripetal stream in the veins. This fact explains why, in persons suffering from varicose veins, often complicated by thrombotic processes, pulmonary emboli are never observed when the patients move about or when they are doing heavy manual work, but are formed only when the body is in the horizontal position. In fact, when a thrombus in a varicose vein becomes dislodged, it moves, as a rule, centrifugally into the fine branches of the saphenous vein and causes embolism of these vessels. Hence, it is an advantage for the patient not to lie in bed after the injection, but to resume his ordinary employment. An objection to the treatment by injection is the fact that the solutions cause necrosis of all the tissues if they are not injected into the lumen of the vein. The injections must be definitely intravenous, never perivenous or paravenous. If a 0.5 per cent solution of mercuric chloride is used, an injection of from 1 to 3 cc. gives the desired result of irritation of the inner wall. If solutions of sodium salicylate are used, at one sitting 6 cc. of 20 per cent solution, 4 cc. of 30 per cent solution, or 2 cc. of 40 per cent solution can be injected. The sodium chloride is used in 20 per cent solution, and 5 cc. of this solution is injected. In the case of glucose, 5 cc. of a 66 per cent solution is sufficient to produce a satisfactory local effect. Though this new treatment of varicose veins has given excellent results, it is pointed out that a relapse is not by any means always out of the question. Either the artificially thrombosed veins again become permeable, or other veins degenerate into varicose ones.

Injection Treatment of Cold Abscesses.—The routine treatment for cold abscess employed by Pollok is aspiration accompanied by injection of Calot's modifying fluid. This consists of olive oil, 70; ether, 30; creosote, 5; guaiacol, 1, and iodoform, 10 parts. The best olive oil is shaken up with absolute alcohol, 1 part of alcohol to 100 parts of olive oil, to remove certain impurities from the oil. The mixture is then left in a filter funnel for about twelve hours; the alcohol floats to the surface, carrying the impurities with it, and the pure oil can be run off below. The oil is then sterilized by boiling for fifteen minutes. The creosote, guaiacol and iodoform are triturated in a sterilized mortar with sterile pestle, and added to the oil when it has cooled below 60 C. The ether is added when the mixture is cold. The result is a clear light-brown fluid which should be kept in the dark in a sterile Erlenmeyer flask, of about 250 cc. capacity, capped with rubber. It is not advisable to give more than 10 cc as a dose, once weekly; this can be repeated indefinitely as long as the abscess requires aspirating. Smaller doses are given to children according to age.

Stricture of Jejunum.—One of Perry's cases was a syphilitic stricture of the jejunum; the other, a secondary carcinoma of the jejunum. The second case is interesting in that a carcinoma of the gallbladder, small in itself and without secondaries in the glands or liver, gave rise to a constriction affecting both the large and the small intestine. At the time of operation, the ring carcinoma in the jejunum was thought to be primary and the mass near the liver to be secondary, whereas the reverse was the true state of affairs. In the first case, the observations were a complete surprise as the history and the roentgenographic examination suggested an obstruction of the large intestine. In the second case, diagnosis of obstruction due to a gallstone was made.

Fukuoka Medical Journal, Fukuoka, Japan

20: 1-13 (Jan.) 1927

Experimental Studies on Overproduction of Pancrease Hormone and Its Absence. I. Kume.—p. 1.
Bacteria of Bile Tracts in Cholelithiais. S. Yokota.—p. 3.
Cysteine of Cristalline. Y. Shoji.—p. 6.

Annales de Médecine, Paris

20: 577-658 (Dec.) 1926

Ganglioneuroma of the Infundibulum. G. Marinesco.—p. 577.
Reactions of the Spleen and Splenic Diseases. C. Aubertin.—p. 600.
*Congenital Syphilis in the Second Generation. H. Grenet and L. Pellissier.—p. 608.
Masked Rheumatic Infection. I. Sklodowski.—p. 626.
Diuretic Action of Mineral Waters Free from Metals. I. Daniel and D. Popescu-Buzeu.—p. 641.

Congenital Syphilis in the Second Generation.—Grenet and Pellissier compare the lesions of syphilis transmitted to the first generation with those transmitted to the second generation. In the latter, the lesions are usually less grave and their aspect less specific. They moreover are less numerous and more uniform than in congenital syphilis in the first generation. The endocrine glands are the elective localization of the lesions, this fact being responsible for the large number of dystrophies and cases of defective development. Anomalies in character and mentality are frequent. They may appear as a condition of excitation with excessive activity, or as a condition of depression with asthenia and melancholia.

Archives d'Ophtalmologie, Paris

43: 641-704 (Nov.) 1926

Study of the Ophthalmic Ganglion in Man and Animals. Beauvieux and J. Dupas.—p. 641.
Melanotic Sarcoma of Limbus Corneae and Sarcomatosis of the Skin. A. Cange and H. Dubouchet.—p. 672.
*Ligation of Common Carotid for Pulsating Exophthalmos. E. de Peyrelongue and F. Baur.—p. 684.

Cure of Pulsating Exophthalmos by Ligation of Common Carotid.—In Peyrelongue and Baur's patient, left pulsating exophthalmos developed after injury to the eye. The characteristic pulsations and bruit were accompanied by paralysis of the motor muscles of the eyeball and by atrophy of the optic disk. The treatment consisted in ligation of the left common carotid, preceded by digital compression, lasting a few minutes, and applied systematically at regular intervals for a few days. Two ligatures were placed above the omohyoid muscle, 0.5 cm. apart. The ligatures were tied very slowly; occlusion of the vessel occurred within one minute. The patient did not complain of discomfort. The pulsations and exophthalmos disappeared, and some of the movements of the eyeball were recovered. An insignificant bruit only persisted. The sight, however, was not regained. The pulsating exophthalmos was caused by traumatic rupture of the carotid into the cavernous sinus. Recurrence was not observed when the patient was reexamined one year later.

Medicina Argentina, Buenos Aires

5: 3-72 (Dec.) 1926

Duodenal Drainage in the Diagnosis of Gallstones. M. R. Castex and J. C. Galan.—p. 3.
Insulin and Ion Therapy in Diabetes Insipidus. C. P. Waldorp.—p. 10.
Temporary Osteosynthesis. F. Z. Guerrini.—p. 16.
Grandidier's Law in Hemophilia. B. González Alvárez.—p. 18.
Rehabilitation of the Crippled. G. Bidou.—p. 22.
Height, Weight and Chest Circumference. F. Frassetto.—p. 27.
Treatment of Malaria. J. J. Manoukhine.—p. 29.
Mosquitoes in Greece. J. P. Cardamatis.—p. 42.
Definition of Constitution. J. Bauer.—p. 44.
*Leishmaniasis Infection in America. E. Escomel.—p. 50.

A Leishmaniasis Indigenous to South America.—In South America, states Escomel, there has existed, at least since the Incas, a leishmaniasis which can be differentiated on etiologic, geographic, clinical, pathologic, parasitologic and therapeutic grounds from oriental sore (kala-azar). The American type includes the skin variety, uta, and the cutaneomucous variety, espundia. The disease may last as long as thirty years, involve different systems and cause both secondary and tertiary manifestations. The vector is unknown, but in Peru it may be *Leptus japa*. In some areas, the disease often coexists with a similar clinical condition; namely, the blastomycosis caused by the fungus provisionally named *Cryptococcus americanus*.

Revista de la Asoc. Med. Argentina, Buenos Aires

39: 529-705 (Nov.-Dec.) 1926

Paralysis of the Lips, Tongue and Larynx and Chronic Poliomyelitis. M. Alurralde and G. O. Gotusso.—p. 529.
Case of Castellani's Bronchial Spirochetosis. P. A. Luzuriaga and J. Bacigalupo.—p. 562.
Determination of Pancreatic Ferments in the Duodenal Juice. R. Lorenzo.—p. 570.
*Statistical Study of Neurosyphilis. M. Alurralde and M. J. Sepich.—p. 589.
Calcareous Infiltration of Sclerodermic Bands, Simulating Osteoid Tissue. R. Lorenzo.—p. 617.
Different Stages of Torsion Dystonia. A. S. Marotta.—p. 630.

Clinical Types of Neurosyphilis.—Among 7,828 neurologic patients studied by Alurralde and Sepich in two hospitals between the years 1914 and 1926, 1,432 had neurosyphilis. The percentage increased from 14.15 in 1915 to 24.20 in 1922 and 21.67 in 1925. Tabes and general paralysis increased from 2.55 and 1.55 per cent to 5.10 and 2.30 per cent, respectively. In another hospital for the insane the number of general paralysis patients increased from 13.43 to 14.61 per cent, and in the hospital for insane women from 0.93 to 1.3 per cent. The other clinical forms, properly neuritic, hardly showed any change, while the so-called latent or attenuated types decreased considerably.

Archiv für exp. Pathologie und Pharmak., Leipzig

118: 259-374 (Dec.) 1926

Effect of Cholagogues. T. Brugsch and H. Horsters.—pp. 267 and 292.
*Effect of Various Salt Solutions on the Gallbladder. T. Brugsch and H. Horsters.—p. 305.
"Addition Compounds." C. G. Santesson.—p. 313.
Effect of Toad Poison on the Isolated Heart of Cold Blooded Animals. O. Gessner.—p. 325.
Morphine Poisoning and Stimulus of the Central Nervous System. F. Schmitz.—p. 358.

Effect of Solutions of Various Salts on the Gallbladder.—In experiments on dogs, Brugsch and Horsters found that peroral administration of a solution of 1.1 per cent of magnesium sulphate or Carlsbad salt did not have any influence on the bile flow, whereas 5.5 or 10 per cent of magnesium sulphate or from 10 to 20 per cent of sodium sulphate were active cholagogues. The liver bile entered the duodenum first, followed by bladder bile or mixed bile. There were not any contractions of the gallbladder. The effect was dependent on decrease in the intestinal tonus and on certain osmotic influences. Another type of bile evacuation is induced by administration of histamin, which almost instantaneously produces contractions of the gallbladder and activates the evacuation mechanism.

Archiv f. Schiffs- u. Tropen-Hygiene, etc., Leipzig

30: 713-752 (Dec.) 1926

*Malaria Treatment of Dermatitis Herpetiformis. W. Cordes.—p. 713.
Treatment of Tropical Colitis. O. Urchs.—p. 715.
Phlebotomus Caucasicus and Phlebotomus Sergenti. L. Parrot.—p. 719.
*Urticaria and "Autoinfection" in Strongyloidosis. F. Fülleborn.—p. 721.
Specific Skin Reaction in Helminthiasis. F. Fülleborn.—p. 732.

Attempt at Malaria Treatment of Dermatitis Herpetiformis.—Intragluteal injection of tertian parasites did not have any influence on the skin eruptions in a boy, aged 4, suffering from dermatitis herpetiformis. On the contrary, new blisters formed and, while the patient rapidly recovered from the induced malaria, the dermatitis remained unchanged.

Urticaria and "Autoinfection" in Strongyloidosis.—A great majority of the strongyloides carriers observed by Fülleborn presented large itching urticarial wheals in the anal region. Strongyloides larvae, that have dveloped from remnants of feces, penetrate the skin in the anal region, which seems to possess a marked hypersensitiveness. This penetration by larvae produces a new permanent focus of infection and contributes to the long duration of human intestinal strongyloidosis; in one case twenty-four years. Except for itching, the skin lesions caused by the larvae are of little importance and disappear rapidly. The larvae penetrate a young and delicate skin more easily than a skin that is rough and old. In these patients urticarial wheals could be provoked by scratching the skin, although they may have been absent for weeks.

Deutsche Zeitschrift für Chirurgie, Leipzig

199: 145-360 (Nov.) 1926

*The Kirchheimer Families of Bleeders. W. J. Klug.—p. 145.
Surgery of the Vessels. F. Krampf.—p. 152.
Diffuse Fibrosis of the Mammary Gland in the Man. K. von Gusnar.—p. 171.
*Carcinoma of the Lung. F. Krampf.—p. 184.
*Ether Injections and Autohemotherapy in Postoperative Pulmonary Diseases. P. König.—p. 198.
*Idem. W. Schaack.—p. 205.
*Gas Gangrene Following Injections of Medicine. R. Wanke.—p. 214.
Action of Blood Injections and Deep Antisepsis on Local Bacterial Infections. M. Biebl and F. Barth.—p. 226.
Effects of Deep Antiseptics on Gas Gangrene Bacilli. K. Ayukawa.—p. 244.
Benign Stenoses of the Esophagus. A. Heindl, Jr.—p. 252.
Lennander's Paramedian Incision. C. Inglessis.—p. 270.
Anomalies of the Penis. R. Sievers.—p. 286.
*New Routes for Anesthetizing the Jaw. A. Lindemann.—p. 307.
Lumbar Anesthesia. P. Mahler.—p. 323.
Treatment of Abscesses of the Sweat Glands. O. Hoche and P. Moritsch.—p. 326.
Provocation of Malaria by Surgical Operations. N. N. Nasaroff.—p. 330.
Postoperative "Paralytic" Ileus and Heidenhain's Intestinal Fistula. H. Demme.—p. 333.
Bleeding Ulcer in Meckel's Diverticulum. H. Fuss.—p. 336.
Appendicitis and Inflammatory Swelling of the Mesentery. R. Gey.—p. 341.
Secondary Appendectomy in Appendicitic Abscess. C. Rausche.—p. 347.
Peculiar Skin Ulcer After Appendectomy. T. Mayeda.—p. 350.
Partial Rhinoplasty. M. Golkin.—p. 354.

199: 361-442 (Dec.) 1926

Anatomy and Treatment of Fractures of the Neck of the Femur. F. Hesse.—p. 361.
Treatment of Habitual Dislocation of the Shoulder. Wustmann.—p. 402.
Ischiopubic Osteochondritis. M. Wülfing.—p. 413.
Curved Osteotomy in Ankylosis and in Genu Valgum. W. Wynen.—p. 420.
Cysts of the Semilunar Cartilages of the Knee. O. Pelizaeus.—p. 426.
Mechanism of Origin of Calcaneal Spurs. M. Jakob.—p. 433.
Improvement of Fixation Apparatus for Open Treatment of Fractures. T. Mayeda.—p. 440.

The Kirchheimer Bleeder Families.—Of fifty-two families descended from the Mampel bleeder family, hemophilia is found in only twelve. Klug makes some corrections in Lossen's figures. He finds only one true bleeder marriage (marriage between bleeder and transmitter). In the hundred years during which this family has been known in the medical literature, the disease has never appeared in females or been transmitted by males or from grandmother directly to grandson. In regard to transmission by males, Klug remarks that most of the bleeders have died too young to have progeny. His statistics show, in the males, twenty-seven bleeders, thirty-nine nonbleeders; in the fifty-eight females, fourteen transmitters and ten nontransmitters, the rest of the female members of the bleeder branches of this family either died young or are childless up to the present time. The presence of nontransmitting females in this family goes far to prove the validity of Bauer's application of Mendel's law to hemophilia.

Carcinoma of the Lung.—Krampf urges operative exposure of the disease focus without delay where there is suspicion of certain operable pulmonary lesions. If the lesion is an abscess, healing results; if carcinoma, there is the possibility of effecting early removal, provided it is a circumscribed tumor and situated at a distance from the hilus.

Ether Injections and Autohemotherapy in Postoperative Pulmonary Diseases.—König's experiences with Bier's ether injections as a preventive of postoperative pulmonary complications were thoroughly disappointing. His material consisted of eighty cases. It was more difficult to judge their effect as a curative measure. In seven of the fifty-one cases treated, the symptoms subsided after the first injection; but were these cases of early bronchopneumonia or were they mild bronchitis, which, untreated, often clears up as suddenly? Using Vorschütz's autohemotherapy in forty-three cases, he obtained a few good results—which, in the same manner, may or may not have been owing to the treatment, and, if the former, were probably due to the withdrawal of blood—but, in general, the pulmonary complications ran their usual course; no clear case of pneumonia was influenced. The dose used was 40 or 20 cc., given as soon as symptoms appeared, and repeated if needful. Schaack's opinion on the

value of these methods differs from König's. At the first sign of acute postoperative bronchitis he injects 1 cc. of ether solution (pure anesthetic ether and olive oil, equal parts of each) into the muscle. From an experience of seventy-five cases, he considers the method a good and simple means of curing postoperative bronchitis and, in many cases, of preventing pneumonia. It is contraindicated when pneumonia has developed and in tuberculosis of the respiratory tract. Its effects are obtained by the hyperemia and increased exudation which it produces in the bronchi. He was satisfied with the results of autohemotherapy (from 20 to 30 cc. of blood withdrawn from the ulnar vein and injected at once into the muscle of the thigh) in eleven cases of postoperative pneumonia. He assumes a specific action of the blood, producing active and passive immunity.

Gas Gangrene from Medicinal Injections.—Thirty-one cases of gas gangrene following medicinal injections have been reported. The syringe appears to be the most likely source of infection. Welch-Fraenkel bacilli were found on seven morphine and camphor syringe tubes, as they lay ready for use in 96 per cent alcohol, in the Kiel university surgical clinic. It is now insisted on that a syringe tube shall be used only once before reboiling. It seems astonishing that such infections are not more common. For an explanation Wanke analyzes the primary diseases in the reported cases. In all, the general condition of the patients was gravely affected and in most a circulatory disturbance stood in the foreground.

New Routes for Anesthetizing the Jaw.—Lindemann describes in detail the methods for obtaining local anesthesia of the upper and lower jaw, respectively, in use in the West German Jaw Clinic in Dusseldorf. In each case the needle is introduced into the infratemporal fossa, and the third or the second branch of the trigeminus, as indicated, is located by the aid of certain landmarks and injected. He claims safety and simplicity for the methods. They have the advantages of avoiding the intra-oral route and of making the injection at a distance from the disease focus.

Zentralblätt für Gynäkologie, Leipzig

50: 3057-3120 (Nov. 27) 1926

*Rhachiotomy in Neglected Transverse Presentation. O. Küstner.—p. 3058.
*The Diameter of the Lumen of the Fallopian Tube. W. Zorn.—p. 3064.
Note on Kamniker's "Results with Lüttge-von Mertz's Alcohol Extract Reaction." Lüttge-von Mertz.—p. 3068.
Lüttge-von Mertz's Sex Prediction. K. H. Slotta.—p. 3068.
Roentgenologic Diagnosis of Myoma, etc. R. Joachimovits.—p. 3069.
Case of Cervical Pregnancy. M. Iolkin.—p. 3071.
Secondary Suture of Third Degree Perineal Tears in the Puerperium. D. Pulvermacher.—p. 3074.
Esophageal Atresia and Communication Between Esophagus and Trachea in a New-Born Child. B. Herzfeld.—p. 3076.

Rhachiotomy in Neglected Transverse Presentation.—Where an approach to the head is not readily obtained, Küstner advises dividing the fetal spine in the thoracic portion. He describes and illustrates his rhachiotome and gives a detailed account of the technic of its use. The instrument is introduced into the fetal thorax by a perforation made between two ribs, and the spinal column located and severed. Working from within, the fetal trunk may now be completely divided; bridges of soft parts left are not, however, a hindrance to extraction.

The Width of the Lumen of the Interstitial Portion of the Fallopian Tube.—Zorn measured the lumen of the interstitial portion of eighty-four fresh specimens of the human fallopian tube by means of a graduated series of six metal sounds, varying in width from 0.5 to 1 mm. He found the diameter of the lumen to be from 0.8 to 1 mm. in chronically inflamed and pregnant tubes. A diameter of 0.6 mm. or less indicated atrophy or hypoplasia. In normal tubes removed from women at or before the menopause, the measurement was 0.7 mm.

50: 3121-3184 (Dec. 4) 1926

Spindle Cell Sarcoma of the Female Urethra. H. R. Schmidt.—p. 3122.
Double Urethra. G. Kubig.—p. 3125.
Malformations of the Urinary Organs. K. Burger.—p. 3128.
*Diagnosis of Ureterovaginal Fistula. O. Brakemann.—p. 3130.
*Diagnosis, Prognosis and Treatment of Renal Tumors. R. Bretschneider. —p. 3134.
Renal Dystopia with Hypoplasia and Tuberculosis of the Genital Organs. E. Kattermann.—p. 3138.

Diagnosis of Ureterovaginal Fistula.—Brakemann recommends roentgen-ray examination as an auxiliary to the usual methods. By means of a ureteral catheter, a contrast fluid is introduced into the renal pelvis and the course of its descent followed.

Diagnosis, Prognosis and Treatment of Renal Tumors.—Bretschneider urges ureteral catheterization and the indigo carmin test in all cases of abdominal tumor the diagnosis of which is not certain. If these methods do not clear up the situation, they should be followed by roentgen-ray examination with a contrast fluid. Intermittent fever may be an early symptom of tumor of the kidney. He observed constipation and diarrhea alternating with constipation, which ceased immediately on removal of the tumor. These symptoms may be caused by disturbances of internal secretions. In one of the two cases here reported the hypernephroma has remained approximately stationary in size and in clinical manifestations for more than two years; nevertheless Bretschneider agrees that, left to themselves, these tumors in nearly all cases lead sooner or later to death. The prognosis of operable cases is not unfavorable. He advises roentgen-ray treatment of inoperable cases and postoperative irradiation to prevent recurrence.

Acta Path. et Microbiol. Scandinavica, Copenhagen

3: 593-680, 1926

*Effect of Culture Mediums on Agglutination. C. Brunkman.—p. 593. In English.
*Bacillus Brunkman. R. Holmquist.—p. 633.
Studies of Tartar Formation. C. Naeslund.—p. 637. In English.

Investigations on the Effect of Culture Mediums on Agglutination.—Brunkman isolated a new bacillus from the feces of a patient whose symptoms were abdominal pains, diarrhea, vomiting and blood in the stools. The peculiarity of this bacillus is that it is not agglutinated by its corresponding specific serum when grown on agar, but is highly agglutinable when grown on Conradi-Drigalski plates. Though it does not agglutinate when taken from agar, it binds the specific agglutinin. Consequently it is the flocculation that fails. The development of the agglutinability upon Conradi-Drigolski plates depends on the lactose present in the medium. Several other carbohydrates and alcohols are also capable of developing the agglutinability of the new bacillus. During the first ten or fifteen days the nutrient mediums produced with increasing age an increasing agglutinability, but thereafter this capacity of the mediums diminished. The agglutinative effect of dextrose was obtained with dead as well as with living bacilli. As regards their agglutinability, the reaction of typhoid, paratyphoid B and Shiga-Kruse bacilli against certain carbohydrates was, in principle, the same as that of the new organism. The effect of the bacillus on mice and guinea-pigs was markedly pathogenic. Intraperitoneal injection killed guinea-pigs weighing 300 Gm. in twenty-four hours. The virulence decreased while the bacillus was kept on culture mediums, but could be rapidly increased by serial transmission through guinea-pigs and mice. Diarrhea or fatal infections could not be obtained by feeding the animals large quantities of cultured bacilli. The bacillus is gram negative, nonmotile, usually single, but sometimes occurring in short chains. Capsules or spore formations were not observed. After a few days of growth vacuoles appeared in the bacilli. The author died from typhoid, contracted during the course of these investigations. It is suggested by Forsman, the editor of Brunkman's papers, that the new bacillus should be called after its discoverer, B. Brunkman.

Bacillus Brunkman.—Holmquist examined the feces of 117 patients without intestinal disturbances and found B. Brunkman in 15 per cent of the cases. In three of twelve cases of typhoid, paratyphoid and dysentery examined, a small number of the bacteria were found, together with *B. typhosus* and *paratyphosus*. In one case it also appeared in the urine. Agglutinins specific for B. Brunkman were found in the serum of several patients. Like the colon bacillus, which it resembles, the organism is not pathogenic except under special circumstances.